International Fisheries Law and the Transferability of Quota: Principles and Precedents

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Executive summary

This paper investigates the practical aspects of supporting a system of limiting fishing capacity in the Inter-American Tropical Tuna Commission (IATTC) by means of trading in the right to capacity among IATTC member States, resembling an international version of the individual transferable quotas existing in some States.

Any such mechanism would need to be consistent with the basic legal framework applicable to international tuna fisheries under Articles 64 and 116-119 of the United Nations Convention on the Law of the Sea (UNCLOS). An important conceptual obstacle, however, is that public international law leaves questions of property to be regulated by States under their domestic legal systems. This may be changing with the creation of an emissions trading system under the Kyoto Protocol to the Framework Convention on Climate Change, but this is both very complex and still at an early stage of development, with no transactions yet having taken place. For the moment, therefore, at least as far as international fisheries are concerned, we must still contend with the freedom of fishing on the high seas, which under Article 116 of UNCLOS is a positive right subject to certain qualifications.

The next three articles impose a duty of cooperation, which States interested in a given fishery have traditionally discharged by agreeing among themselves to limit their catches or effort. This is at best a partial solution, since any limits these States accept will, by customary international law codified as Article 34 of the Vienna Convention on the Law of Treaties, only bind those States that are parties to the treaty under which the rules are made, and hence are vulnerable to free riding or undermining by new entrants. If quota can be traded, it may thus still not be a particularly attractive asset, because it does not confer an absolutely exclusive right.

Looking more closely at the nature of the rights represented by a quota, the catch and effort limits established by fisheries commissions turn out to be just that: negative limitations on a freedom rather than a positive entitlement to take a certain amount of catch or expend a given amount of effort that would otherwise be forbidden. The result is that (except in a two-member commission) quota cannot simply be traded without further ado, because the limiting duty is owed to every other member of the commission, not just the one from which the quota is to be bought. This need not be an insuperable difficulty, however, nor does it even require amendment

of any commissions' constitutive treaties, since they are already flexible enough to accommodate more or less any rational management measure. Rather, if the remaining members can be persuaded to waive their rights to hold the buying member to its original quota, substituting instead the higher one that is the sum of the original quota and the extra quota purchased, then a binding decision of the commission itself will suffice. Quite a number of decisions of this type have in fact already been made, mostly *ad hoc* by the International Commission for the Conservation of Atlantic Tunas, but also by other fisheries commissions including the IATTC's own 2002 resolution (C-02-03) on limiting the capacity of the fleet operating in the Eastern Pacific Ocean (though this was done indirectly and perhaps inadvertently, in a way that renders the resulting assets rather illiquid).

The most thorough treatment to date of legal questions surrounding quota trading has been in the Commission for the Conservation of Southern Bluefin Tuna, where no trading has actually taken place, but a consultant came to the view that there was no fundamental obstacle to it – a conclusion with which New Zealand in a separate legal opinion of its own largely agreed, though not without qualifications centring on compliance. In sum, for the IATTC to follow suit, the main novelty in what would be required is a moderately elaborate administrative machinery to support the trading, including a rigorous system of accounting for capacity, the 2002 resolution not having been designed to support the weight of a formal trading mechanism. Practical considerations attending the accounting include whether or not institutionalised carryover of capacity in excess of a limit and/or spare capacity (borrowing and banking) is to be permitted, how to treat capacity of non-members, in particular that of coastal States in the Eastern Pacific Ocean that are not (yet) members of the IATTC or formally cooperating with it, as well as controls on nationals of members who may be using the capacity, and effort of a non-commercial nature (e.g. for scientific research).

All that said, trading will only make a substantial contribution to conservation of the stock if non-members too can be convinced to cooperate with the system. On this score the omens are moderately encouraging, especially if Article 8(4) of the UN Fish Stocks Agreement is given its full weight as emerging custom: States must either join or cooperate with a commission such as the IATTC in relation to the stocks for which it is competent, or refrain from fishing for them. Since the duty of cooperation already exists in customary international law, it is now principally a matter of securing recognition that new entrants are no longer at liberty to disregard non-discriminatory trading schemes that make purchase of capacity quota a condition of any State increasing its capacity beyond what it has already. This would be tempered in the case of coastal States with an Eastern Pacific Ocean frontage by allocating them quota to develop their tuna fisheries within reason where this has not yet occurred. Such a system will not be established overnight, for this will entail an intense allocative negotiation at the outset – but the reward is likely to be management benefits beyond just the direct economic ones, since after that trading obviates the need for periodic renegotiation of quotas. In this way, the outcome may be a new

species of quasi-property in international law, which if it happens could go some distance towards overcoming the tragedy of the commons besetting high seas fisheries.

A Introduction

In this paper the author has been asked to investigate the practical aspects of supporting a system of limitation of catch or effort (measured as fishing capacity) in the Inter-American Tropical Tuna Commission (IATTC)[1] with a mechanism for the trading of the rights to that capacity among member States of the Commission, much as exists in some States that operate individual transferable quotas (ITQs). Because of space constraints, the reader's familiarity with the basic legal framework applicable to international tuna fisheries under Articles 64 and 116-119 of the United Nations Convention on the Law of the Sea[2] (UNCLOS) is assumed.[3]

Any such trading mechanism presupposes, however, at least a rudimentary system of property rights, which immediately raises a conceptual obstacle: the lack, in public international law, of any law of property as such. States do buy and sell commodities to each other, extend loans to each other and so on, but these are essentially commercial transactions that are either embodied in treaties,[4] or, particularly where any physical objects are to change hands, the transaction is conducted under the system of domestic law of one of the parties[5] or sometimes a third State. The closest that traditional international law comes to a regime of property independent of national legal systems concerns the law on the acquisition of territory. More recently, however, the recognition of the tragedy of the commons on the international plane has produced some tentative steps towards property-like solutions. The most prominent of these is the creation of an

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[1] Created by the Convention for the Establishment of an Inter-American Tropical Tuna Commission (Washington, 31 May 1949) 80 United Nations Treaty Series (hereafter UNTS) 3.

[2] Done at Montego Bay, 10 December 1982, 1833 UNTS 3.

[3] For a very good account of that framework see W.T. Burke, *The New International Law of Fisheries: UNCLOS 1982 and Beyond* (Oxford: Clarendon Press, 1994), chapter 5 on highly migratory species.

[4] One of the better known examples is the post-war line of credit of $3.75 billion extended by the US to the UK (Financial Agreement between the Governments of the United States of America and the United Kingdom of Great Britain and Northern Ireland, Washington, 6 December 1945, 126 UNTS 13). Although not a loan, the reparations of 132 billion gold marks quantified by the Reparation Commission under Article 233 of the Versailles Treaty (Treaty of Peace with Germany, done at Versailles, 28 June 1919, (1919) 13 *American Journal of International Law* (hereafter AJIL) Supp 151) are a good if fortunately rare illustration of another way in which a debt from one State to another can be incurred and given recognition in a treaty.

[5] For example, in the *Norwegian Loans* case (*Certain Norwegian Loans (France v. Norway)*, ICJ Reports 1957, p.9), the bonds issued by Norway and purchased by French investors were governed by Norwegian, not international law. The International Court of Justice (ICJ) found that it had no jurisdiction to decide the case. There is a great deal of practice and case law on compensation for expropriation of property of foreign nationals, but the character of the assets as property is still rooted in the domestic law of the expropriating State.

emissions trading system envisaged under the Kyoto Protocol to the Framework Convention on Climate Change,[6] but this is both very complex and still at an early stage of development, with no transactions having taken place by 2007.[7]

On the face of it, the freedom of fishing on the high seas seems a more formidable barrier to creation of property rights in fisheries than in the case of harmful emissions, since under Article 116 of UNCLOS fishing is a positive right subject to certain qualifications, whereas there is no such freedom to pollute the atmosphere. Rather, since the *Trail Smelter* arbitration as long ago as 1941 established the wrongfulness of cross-border air pollution,[8] in this instance from a point source, the problem has been of proving causation in the form of relative contributions to damage by multiple polluters or diffuse sources: even if there is scientific consensus that the cause of damage suffered by a low-lying State from, say, rising sea levels is anthropogenic global warming, this will be of no avail to that State.

By contrast, in exclusive economic zones (EEZs) and waters landward of them where the coastal State has jurisdiction over fisheries, property rights can be created, and where tried have been shown to avoid depletion of stocks (though at some social cost). Mere establishment of an EEZ does not guarantee that fisheries in it will be well managed, a situation well described by Barnes,[9] but it does deprive coastal States of any excuses for mismanagement of stocks that are not straddling or highly migratory. In many cases they have limited catch, but not entry (capacity), a policy whose insufficiency is amply documented in the companion paper by Allen and Joseph. While the unsatisfactory experience with the EEZ is attributable to States' failure to use the powers of their domestic legal systems to prevent the emergence of new entrants, international law equips them much less well to achieve this end in fisheries prosecuted wholly or partly on the high seas. No matter how strict the restraints the participants may impose on

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[6] United Nations Framework Convention on Climate Change (New York, 9 May 1992), 1771 UNTS 107 and its Kyoto Protocol (Kyoto, 11 December 1997), (1998) 37 *International Legal Materials* 22; see Decision 12/CMP.1, Guidance relating to registry systems under Article 7, paragraph 4 of the Kyoto Protocol and Decision 13/CMP.1, Modalities for the accounting of assigned amounts under Article 7, paragraph 4 of the Kyoto Protocol, in *Report of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol in its first session, held at Montreal from 28 November to 10 December 2005, Addendum Part Two: Action taken by the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol at its first session*, UN doc FCCC/KP/CMP/2005/8/Add.2 (30 March 2006), at 21 and 23 respectively; also Annual report of the administrator of the international transaction log under the Kyoto Protocol (UN doc FCCC/KP/CMP/2007/5 (22 November 2007)), all accessed on 6 March 2008.

[7] D. Sturt, Programme Officer, United Nations Framework Convention on Climate Change Secretariat, personal communication, 10 April 2008. Paragraphs 27 and 28 of UN doc FCCC/KP/CMP/2007/5, *supra* n 6, suggest that the only transactions to date have been the initial issue of credits rather than trading in them.

[8] *Trail Smelter (United States v. Canada)* (1941) 3 *Reports of International Arbitral Awards* 1905, reprinted in (1941) 35 AJIL 684.

[9] R. Barnes, "The Convention on the Law of the Sea: An Effective Framework for Domestic Fisheries Conservation?", in D. Freestone, R. Barnes and D. Ong (eds), *The Law of the Sea: Progress and Prospects* (Oxford: Oxford University Press, 2006), 233 at 233-234 and 241-242.

themselves, they will, by customary international law codified as Article 34 of the Vienna Convention on the Law of Treaties,[10] only bind those States that are parties to the treaty under which the rules are made, and are thus vulnerable to free riding or undermining by new entrants.

This paper considers whether trading in effort measured by capacity could make the required downward adjustments easier in the IATTC and other commissions and less likely to become mired in the allocative conflicts that hamper their overall conservation efforts. Under a first-principles analysis from an international legal perspective (section B), it is shown that the standard concept of national allocations within a total allowable effort creates no tradable rights. In section C, the author's previous account of the history of quota transfers in other international fisheries commissions is updated and expanded by recounting a substantial debate on trading that took place some years ago in the Commission for the Conservation of Southern Bluefin Tuna (CCSBT) which demonstrates that, for the IATTC to follow suit, it would be a relatively simple matter to set up a system for this – and there would be no need to amend the 2003 Antigua Convention.[11] Rather, the main novelty in what would be required is a moderately elaborate administrative machinery to support the trading, including a rigorous system of accounting for catch. Section D then applies these findings to the IATTC's circumstances, including a description of a capacity quota trading mechanism that appears to have been created by inadvertence but would probably be incapable of supporting the weight of a formal trading mechanism. In section E some practical considerations surrounding the need to account for use of catch or effort quotas are canvassed. The paper concludes (section F) with an assessment of the prospects of the quota shares represented by national allocations becoming permanent, in effect creating a new species of quasi-property in international law, and some obstacles to this step.

B National allocations under freedom of fishing

1 Origin of national allocations

By definition, transfers of quota of catch or effort from one State to another can only take place if the States in a fishery have already allocated the total allowable catch or effort (TAC and TAE respectively) among themselves either directly or through an international commission, resulting in what are known as national allocations. This is a relatively recent phenomenon in fisheries, although similar arrangements were known earlier in the regulation of high seas capture of

[10] Done at Vienna, 23 May 1969, 1155 UNTS 331.

[11] Convention for the Strengthening of the Inter-American Tropical Tuna Commission Established by the 1949 Convention Between the United States of America and the Republic of Costa Rica, done at Antigua Guatemala, 27 June 2003, not yet in force; the text is available at http://www.iattc.org/PDFFiles2/Antigua_Convention_Jun_2003.pdf (accessed on 17 March 2008).

marine mammals: the 1911 Bering Sea Fur Seals agreement[12] divided not the harvesting itself but its product: in return for refraining from pelagic sealing, which by Article I was prohibited for all parties in the Pacific Ocean north of 30ºN, Canada and Japan were each granted a 15% share, by number and value, of the much larger number of skins of the Pribilof and Commander Islands rookeries which the United States[13] and Russia[14] respectively were able as a result of their sole stewardship to harvest sustainably on their island territories, while each of the other three parties would obtain a 10% share of the skins from Japan's Robben Island rookery,[15] with an equivalent obligation on Great Britain if any seal herd were to establish itself on Canadian islands in the Convention area.[16]

The strong commercial imperative to trade in quota when economic incentives are allowed free rein can be seen in the history of the International Whaling Commission (IWC), where, even though no national allocations were formally possible under its constitutive treaty,[17] the States concerned simply came to agreement outside the IWC as to the division among themselves of the global catch limit.[18] There seems no reason of international legal principle why the quotas established in this way could not have become binding on the IWC members, and indeed at least one of the agreements in question was of treaty status.[19]

National allocations for fisheries were first proposed in 1968 by Crutchfield for the cod and haddock stocks of the North-West Atlantic.[20] Soon after, Kask called for licences to be auctioned internationally, which he saw as a way to allow free (but not costless) access to the world's tuna resources.[21]

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[12] Convention between the United Kingdom, the United States of America, Japan and Russia respecting measures for the preservation and protection of the fur seals in the North Pacific Ocean, done at Washington, 7 July 1911, reproduced at (1911) 5 AJIL Supp 267; [United States] Treaty Series No 564.

[13] *Ibid*., Article X. Article XI qualified this by obliging the United States to deliver a minimum of 1000 skins annually to Canada and Japan unless it closed its commercial operations, in which case they were each to be compensated by US$10000 annually unless there were fewer than 100,000 seals frequenting the islands.

[14] *Ibid*., Article XII, including the qualification that harvesting and the associated sharing obligation could be suspended for as long as there were fewer than 18000 seals on the islands.

[15] *Ibid*., Article XIII, including the qualification that harvesting and the associated sharing obligation could be suspended for as long as there were fewer than 6500 seals on the islands.

[16] *Ibid*., Article XIV.

[17] International Convention for the Regulation of Whaling, done in Washington, 2 December 1946, 161 UNTS 72.

[18] See S.J. Holt, "Sharing the Catches of Whales in the Southern Hemisphere" in R. Shotton (ed), *Case studies on the allocation of transferable quota rights in fisheries* (FAO Technical Paper 411) (Rome: FAO, 2001), 322 at 343ff.

[19] Arrangements for the Regulation of Antarctic Pelagic Whaling, done at London, 6 June 1962, 486 UNTS 263.

[20] J.A. Crutchfield, "National Quotas for the North Atlantic Fisheries: An Exercise in Second Best", in L.M. Alexander (ed), *The Law of the Sea: International Rules and Organization for the Sea Proceedings of the Third Annual Conference of the Law of the Sea Institute June 24 – June 27, 1968, University of Rhode Island* (Kingston: University of Rhode Island, 1969), 263.

[21] J.L. Kask, *Tuna: A World Resource* (Occasional Paper No 2; Kingston: Law of the Sea Institute, University of Rhode Island, 1969), at 31n.

Notwithstanding the diminished spatial extent of the high seas since the advent of the EEZ, a qualified freedom of fishing is preserved there by UNCLOS Articles 87 and 116.[22] One of the most important qualifications is paragraph (a) of the latter, which envisages that States interested in a fishery will mutually limit their harvests of the stock by binding commitments of treaty status, leaving it open to them to do this either directly or via establishment of an international fisheries commission. Hitherto their willingness to do so has been assumed to be impaired by the knowledge that under the principle *pacta tertiis nec nocent nec prosunt* (literally "agreements neither harm nor benefit third persons").[23] In other words, such limits apply only to the parties to the relevant treaty, so that the fishery remains open to new entrants who are subject to the general duty of cooperation with existing participants in the fishery but not to any quantified catch or effort limit.

Recent developments may, however, yet give heart to advocates of negotiated mutual restraints. Under Article 8, paragraph 4 of the UN Fish Stocks Agreement[24] only those States which are members of the relevant fisheries commission or participate in an equivalent arrangement, or agree to apply its conservation and management measures, shall have access to the fisheries resources to which those measures apply. It is beginning to be argued that this treaty-based rule

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[22] Article 87, headed "Freedom of the high seas", reads as follows:

> 1. The high seas are open to all States, whether coastal or land-locked. Freedom of the high seas is exercised under the conditions laid down by this Convention and by other rules of international law. It comprises, *inter alia*, both for coastal and land-locked States:
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> …
>
> (e) freedom of fishing, subject to the conditions laid down in section 2 [i.e. Articles 116 to 119];
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> …
>
> 2. These freedoms shall be exercised by all States with due regard for the interests of other States in their exercise of the freedom of the high seas, and also with due regard for the rights under this Convention with respect to activities in the Area.

Article 116, bearing the heading "Right to fish on the high seas", is in these terms:

> All States have the right for their nationals to engage in fishing on the high seas subject to:
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> (a) their treaty obligations;
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> (b) the rights and duties as well as the interests of coastal States provided for, *inter alia*, in article 63, paragraph 2, and articles 64 to 67 [i.e. straddling, highly migratory, anadromous and catadromous stocks]; and
>
> (c) the provisions of this section.

[23] *Supra* n 10 and accompanying text.

[24] Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (opened for signature at New York, 4 December 1995), 2167 UNTS 3.

has already attained the status of custom, a review of State practice by Rayfuse showing that fisheries commissions all now "demand either membership, cooperation or abstention [from fishing] from non-members" who in turn have in several ways "acquiesced in these assertions of jurisdiction".[25] If so, then the crucial element of exclusivity, one of the mainstays of property rights that makes trading in them worthwhile, is much closer to being present.[26]

That said, merely creating an international fisheries commission cannot in isolation abolish its members' freedom of fishing in the relevant areas for the stocks concerned. This would be tantamount to a prohibition on fishing by them in the absence of a positive commission decision to permit it, but the practice of existing commissions does not support such a conclusion;[27] indeed their history suggests precisely the opposite. Often many years pass between the coming into existence of a commission and its establishment of catch or effort limits, the IOTC and WCPFC being cases in point. In no such situation has fishing been suspended in the interim. The same is true where the commission succeeds in settling limits, but later developments lead to an inability to renew or amend limits as they expire, which occurred in both the CCSBT and the International Commission for the Conservation of Atlantic Tunas (ICCAT)[28] – members all carried on harvesting, though some of them announced voluntary catch limits.

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[25] R.G. Rayfuse, *Non-Flag State Enforcement in High Seas Fisheries* (Leiden/Boston: Martinus Nijhoff, 2004), 373. Accord the Australian statements to the UN General Assembly in 2005 and 2006, see for example Australia's statement in the debate on Oceans and the Law of the Sea at the 2005 session of the UN General Assembly ("Statement by Senator Robert Ray[,] Parliamentary Adviser to the Australian Mission to the United Nations", <*www.australiaun.org/unny/il%5f281105.html*> (accessed on 28 March 2008)), where it was asserted that: "it is Australia's strong view that States have an obligation to either join relevant RFMOs where entitled to do so, or to otherwise refrain from fishing in the RFMO regulated area unless they agree to apply all relevant conservation measures."

[26] From an economic point of view, according to A. Scott, "Introducing Property in Fishery Management" in Ross Shotton (ed), *Use of Property Rights in Fisheries Management*, Vol 1, FAO Fisheries Technical Paper 404/1 (FAO, Rome, 2000), 1 at 5-6, the four main characteristics of property are duration, security, exclusivity and transferability. In legal terms, W.N. Hohfeld, "Fundamental Legal Conceptions as Applied in Judicial Reasoning" (1917) 26 *Yale Law Journal* 710 at 746ff analysed property rights as the multiplicity of duties imposed on an indeterminate number of persons not being duties of positive performance but of exclusion; i.e. the right consists of a general protection from interference.

[27] Note that, for those many fisheries commissions such as the Asia-Pacific Fisheries Commission (see FAO website) that have only advisory rather than management functions; as they are constitutionally incapable of establishing TACs and national allocations, the issue of the trading of such allocations can never arise.

[28] As to the tardy setting of TACs in the CCSBT's early years see A. Serdy, "Trading of Fishery Commission Quota under International Law", (2007) 21 *Ocean Yearbook* 245 at 270n. In 1998 Japan implemented unilaterally an experimental fishing program in addition to its commercial catch; since Australia and New Zealand opposed the additional catch, no TAC could be adopted at all for several years, but the members continued to harvest SBT in roughly the same amounts as before, as seen in "Global Catch by Country" (Attachment 4 to *Report of the Extended Scientific Committee for the Tenth Meeting of the Scientific Committee, 5-8 September 2005, Taipei, Taiwan* (Appendix 2 to *Report of the Tenth Meeting of the Scientific Committee, 9 September 2005, Narita, Japan*)), <*www.ccsbt.org/docs/pdf/meeting_reports/ccsbt_12/report_of_sc10.pdf*> (accessed on 28 March 2008). ICCAT's failure to make any recommendation on a catch limit for ABT at its 2001 meeting is seen in *Proceedings of the 17th Regular Meeting of the International Commission for the Conservation of Atlantic Tunas (Murcia, Spain -*

It is conceivable for the members of a fisheries commission to agree to pool their respective rights in a fishery, vesting them in the commission as the representative of their collective interests, so that for the right to fish they must henceforth come to terms with it, but again non-members will not be bound by that. The obligation of States to refrain from fishing for a stock or in an area governed by a fisheries commission of which they are not a member may be in the process of entering the corpus of custom, but would need substantial qualification if it is not to degenerate into an endorsement of closed shop commissions in which the "ins" discriminate against the "outs" by insisting that the only way to cooperate with them is to take zero catch. One could say that non-members owe the commission a duty of cooperation, in the sense that non-members already owe members that duty under the relevant provisions of UNCLOS, and it would seem to be in the members' power to endow the commission with power to receive non-members' cooperation on their behalf, i.e. to insist that the duty be discharged by cooperating with the commission as their collective delegate rather than with the member States individually.[29]

States, however, have long preferred to keep the fisheries commissions they create institutionally weak with respect to their members, for reasons identified by Koers.[30]

2 National allocations analysed from first principles

In an earlier publication, the present author demonstrated by means of a worked example that national allocations of catch are no more than reciprocal obligations to limit catch.[31] Here the

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November 12 to 19, 2001)), in ICCAT, *Report for biennial period 2000-01 Part II (2001) - Vol.1*, at 55-56 (paragraphs 14.4-14.10). For 2002 reported catches totalled around 30,000 tonnes, and if unreported catches are factored in, the true total was likely to be around 35,000 tonnes, little different from 2001, when a TAC applied: *Reports of the Meeting of Panels 1-4* (Annex 8 to *Proceedings of the 18th Regular Meeting of the International Commission for the Conservation of Atlantic Tunas (Dublin, Ireland - 17 to 24 November 2003)*), in ICCAT, *Report for Biennial period 2002-03 Part II (2003) - Vol.1*, 177 at 182.

[29] This is the view taken by the IAATC itself in Resolution C-03-05 (Resolution on Data Provision, Appendix 6 to IATTC, *Minutes of the 70th Meeting, Antigua (Guatemala), 24-27 June 2003*), <http://www.iattc.org/PDFFiles/IATTC%2070%20Minutes%20Jun%2003%20ENG.pdf> (accessed on 3 March 2008)), at 30, in which the fourth paragraph of the preamble speaks of non-member States fishing in the region having an obligation under international law to cooperate with IATTC, of which the provision of catch data is an aspect.

[30] A.W. Koers, *International Regulation of Marine Fisheries: A Study of Regional Fisheries Organizations* (West Byfleet and London: Fishing News (Books) Ltd, 1973), at 36 writes: "It is a political reality that States are extremely reluctant to give up any of their prerogatives in favour of international law." At 194-195 he attributes States' reluctance to give international fisheries commissions binding powers on members to the fact that, under freedom of fishing, membership of such commissions is voluntary, and binding authority "would expose them to the risk of being forced to accept a certain conservation measure, whereas non-member States would be under no obligation with regard to such a measure." He adds, at 275-276: "States have demonstrated over and over again that they are willing to yield authority to international institutions only if this becomes unavoidable." But by the time States are convinced of its necessity, "irreparable harm may have been inflicted upon the resources…The history of international fisheries commissions is an unfortunate illustration of this point." Burke, *supra* n 3, at 92 predicts that high seas fisheries management will continue to fail if States persist in withholding authority from fisheries commissions; at 95 he argues that the EEZ was an earlier consequence of this failure.

demonstration is repeated, but this time for effort in the form of capacity limits as first adopted by IATTC in 1999,[32] and with concrete numbers replaced by algebraic symbols to show that the point does not depend on the quantities concerned.

In the simplest case, suppose there are three members A, B and C whose capacity limits are x, y and z cubic metres (m^3) respectively.[33] The rather unrealistic unspoken assumption when effort of this kind is made transferable is that the fleets of all three States fish in the same area for the species at the same stage of its life cycle using the same gear, with equal skill and for the same number of days per year, so that, as long as the aggregate of A, B and C's effort (capacity) remains below $(x + y + z)\ m^3$, there is no effect on the stock from one State's share of the TAE rising and another's falling commensurately. In practice, effective effort is likely to rise in any transfer since the vendor is likely to be less efficient than the purchaser. Be that as it may, under this classical type of national allocation, A owes a duty to B and C to limit its effort to $x\ m^3$, B owes a duty to A and C to limit its effort to $y\ m^3$ and C owes a duty to A and B to limit its effort to $z\ m^3$.[34] Now imagine that a fishing company formed under the laws of C wishes to purchase a vessel of hold capacity $\Delta\ m^3$ and a company registered in B has such a vessel that it is prepared to sell. The possibilities here are less complicated than in the case of TAC or other forms of effort limitation such as vessel days or hooks deployed, the entitlement to which is drawn down over time and may be only partially exhausted at the time when the transfer takes place. Accounting for effort measured by capacity would seem to be possible only on a continuous basis – the member's capacity at any time is either within its limit or not, and a member complies with its obligation only if at no time does its capacity exceed its permitted limit. By contrast, an annual census date, whereby compliance is checked only once a year on a date known in advance, would effectively leave effort unconstrained on every other day of the year.

In practice only two situations are possible: before and after the quotas are set for the relevant fishing season.

If the following year's allocation has not been made, B and C could simply let it be known that their wish for quota for the following year was $(y - \Delta)\ m^3$ and $(z + \Delta)\ m^3$ tonnes respectively, and if A wishes to continue to use its $x\ m^3$ of capacity and the condition of the stock has not

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[31] Serdy, *supra* n 28, at 271-272.

[32] See *infra*, text at nn 130-139.

[33] A two-member commission reduces the matter to triviality, since if the members A and B owe their effort-limiting obligations only to each other, they remain free to renegotiate these limits at any time by mutual consent, which is functionally equivalent to quota trading.

[34] In addition, it might be possible to speak of A, B and C each owing the same duty to the fisheries commission in addition to, or perhaps even to the exclusion of, duties owed to each other: this is the approach taken by the New Zealand opinion on trading of quota in the CCSBT, *infra*, text following n 104. In *Reparation for Injuries Suffered in the Service of the United Nations*, ICJ Reports 1949, p.174, the ICJ in an advisory opinion held (at 181-182) that not only did the UN have international legal personality *vis-à-vis* its own members – which was not stated in the UN Charter, but held to be a necessary implication – but was owed certain duties by them. This will remain without practical significance, however, unless the commission is given some sort of enforcement power over its members – again conceivable in theory, but not, at any rate hitherto, actually encountered in practice.

deteriorated, there should be no problem. Note that there are many conditions attached to this simple case,[35] and that it does not necessarily involve trading as such of quota; the quotas of individual members are simply adjusted to match the post-transaction ownership of the vessels, and the timing of the change of flag is manipulated to coincide with the beginning of the next quota season.

The position is different if the national allocations have already been made. Suppose that the company in C makes an offer for the vessel in B, which its owner accepts. B and C proceed to use $(y – \Delta)\ m^3$ and $(z + \Delta)\ m^3$ of capacity respectively. In terms of the original analysis, B has complied with its duty to A and C to keep its capacity to $y\ m^3$ or less. For C, however, the position is less simple. Its duty to A and B was to use no more than $z\ m^3$ of capacity in the fishery. B may be taken to have waived its correlative right as a necessary consequence of its support for the transaction (evidenced by releasing the vessel from its register), at least to the extent that it cannot complain of any breach of duty by C if the latter's capacity remains below $(z + \Delta)\ m^3$. But A has granted no such waiver to C. C's duty to A thus remains one of limiting its capacity to $z\ m^3$, which it will breach if it permits the vessel's new owner to use it in the fishery in addition to those it already licenses to do so.

The same is true if the buyer of the vessel is a company having the nationality of D, a non-member of the commission, and B purports to transfer all or part of its allocation to D (despite there being nothing in Resolution C-02-03, considered below,[36] that allows this). D is in no position to exercise B's rights under the Resolution, and the transaction is no defence to any case A and C might mount against D independently of the IATTC's legal texts. While the absence of any dispute settlement clause in the current Convention and the weakness of Antigua Convention's non-compulsory dispute settlement provisions[37] may shield a member in B's position from the legal consequences of its breach of its obligations, A and C could be in a reasonably strong position if the rules governing the system are sufficiently robust for them to be able to prevent the vessel from being removed from the Regional Vessel Register. In that event,

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[35] A frequent complication would be the case of non-equivalence of effort by B and C in terms of its effect on the stock. If a vessel in the hands of C has less impact on the stock than the same vessel in the hands of B, then there is no reason to oppose the transaction. But if its effect is greater, then it would be reasonable for A to insist on an adjustment to restore the equivalence. Unlike the case of catch limits considered in Serdy, *supra* n 28, at 271n, it would be difficult to imagine how a member might prove to the satisfaction of other members that its capacity has less actual impact on a cubic-metre-for-cubic-metre basis than theirs, given that effort efficiency would drive any transactions.

[36] *Infra* n 148 and text following.

[37] Article XXV of the Antigua Convention, *supra* n 11, simply requires parties to cooperate to avoid disputes (paragraph 1); should a dispute nonetheless arise (paragraph 2) that "is not settled through…consultation within a reasonable period, the members concerned shall consult among themselves as soon as possible in order to settle the dispute though any peaceful means they may agree upon, in accordance with international law." This may not apply if all disputant States are all parties to the UN Fish Stocks Agreement, the effect of whose Article 30(2) is to superimpose the compulsory procedures in Part VIII of the Agreement on any fisheries treaty to which they are party.

the sale creates no spare capacity for B, which is hence unable to replace the sold vessel on the Register with another, and a net addition to the capacity in the fishery is thereby prevented.

Just as where catch limits are the preferred measure, therefore, trading of effort limits cannot take place as of right except in the trivial instance of a two-member commission. Rather, it would be necessary to obtain a waiver from each other member of the commission to which the obligation to adhere to the limit is owed. Alternatively the fisheries commission could grant the waiver itself on behalf of all of its members. If this decision can be taken by (qualified) majority, this has the additional effect of making the waiver more likely to be obtained, since a minority of opponents who would not individually have given waivers can be outvoted. On the other hand, matters of this kind, which are substantive rather than procedural, often require consensus under the constitutive treaty,[38] in which case A or any other member can veto the transaction.

Whether or not retroactive transfers as a solution to over-quota capacity are permitted is an issue just as for overcatch. Let us return to the initial scenario, and suppose that for a period of p days B's capacity was in fact $(y - \alpha)$ m^3 and for a period of q days C's was $(z + \beta)$ m^3. If $p\alpha \geq q\beta$, then the TAE as a whole is not being exceeded, and C could in theory purchase quota from B to cover its excess capacity. The matter of whether it should be permitted to do so may be influenced by the presence or absence of a year-to-year accounting mechanism, e.g. one in which the next year's nominal national allocation of effort to C were reduced by $q\beta/365$ to compensate.[39] If there were such a mechanism in place, C's excess capacity from year 1 would be counted against its year 2 national allocation, and if that too were z m^3, then its actual capacity limit in that year would be $(z - q\beta/365)$ m^3. It would then be for C to decide whether it preferred to clear its excess capacity by debit against its future capacity limit, or purchase additional quota if any is available, or some combination of the two. The relative attraction of the two courses of action would be affected by any penalty applicable to the excess capacity, e.g. if a formula applies or a flat deduction of β m^3 were mandatory, irrespective of how short the time was during which the capacity was in excess of C's quota,[40] that would increase the attraction of purchasing-in quota to cover overcatch. Conversely, if underuse of capacity quota can be carried forward, then B may prefer to do that rather than sell its unused quota to C; where carry-forward is permitted, it is generally on a 1:1 basis up to some specified limit,[41] so if B's underuse is greater

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[38] Note that in practice fisheries commissions often go to great lengths to secure consensus even when the treaty does not require this (for example, in the WCPFC, by Article 20(2) of the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean, done at Honolulu, 5 September 2000, (2001) 40 ILM 278, voting can occur only once "all efforts to reach a decision by consensus have been exhausted"), and votes are rarely called.

[39] Or $q\beta/366$ in a leap year.

[40] See the discussion in Serdy, *supra* n 28, at 273-275, of penalties in relation to catch limits.

[41] See the examples in Serdy, *supra* n 28, at 275n, of carryover limits applied by ICCAT, so that there is no build-up of banked quota.

than that limit, it will have an incentive to come to terms with C. In the example above, where $p\alpha > q\beta$, B could sell C $q\beta$ m^3 in order to eliminate the latter's excess capacity and still have ($p\alpha - q\beta$) m^3 left to carry forward into year 2.[42]

These being the basic underlying rules and concepts, the next step is to see to what extent they have been applied or modified in the treaties by which fisheries commissions have been established.

3 Relevant provisions of treaties constituting fisheries commissions

It is commonly assumed that the freedom of fishing on the high seas embodied in Article 116 of UNCLOS presents an insuperable obstacle to the rights relating to high seas fisheries acquiring any proprietary character.[43] In an earlier work, however, the present author investigated the nature of regulatory measures that RFMOs are empowered to make by their constitutive treaties to whether they pose any obstacle to the institution of a quota trading scheme, and found that all either were silent or described the measures the RFMO may adopt with sufficient generality to permit this.[44] The IATTC's functions are set out in Article II, paragraph 5 of the 1949 Convention that established it,[45] which remains its governing instrument pending the entry into force of the 2003 Antigua Convention.[46] By this provision, the IATTC is to

> Recommend from time to time, on the basis of scientific investigations, proposals for joint action by the High Contracting Parties designed to keep the populations of fishes

[42] A system designed with conservation in mind would presumably permit quota to be purchased only from underused capacity, especially if there is a penalty for excess capacity. Say there is a penalty of η % for excess capacity above γ m^3, and C's excess was $(\gamma + \zeta)$ m^3. In year 2 C's actual capacity limit, assuming no change in its national allocation, would be $(z - \gamma - (100 + \eta)\zeta/100)$ m^3. Although B may have less than ζ m^3 spare capacity, if C were to purchase ζ m^3 of quota from it, it could have an actual capacity limit in year 2 of $(z - \gamma)$ m^3, the difference of $(100 + \eta)\zeta/100$ m^3 reflecting the η % penalty it would thereby have avoided. B would not be liable to any penalty as long as $\zeta < \gamma$, because its sale of quota would on the preceding assumption leave it with an overcatch no greater than ζ m^3, since it started from a position of surplus. In order not to undermine the penalty's deterrent effect it would be prudent to provide that the vendor should be able to sell no more quota than its surplus and that quota purchased should be permitted to be credited only against excess capacity up to the carryover limit and not against any penalty.

[43] See e.g. J. Joseph, *Managing Fishing Capacity of the World Tuna Fleet* (FAO Fisheries Circular 982; Rome: FAO, 2003), at 62, where he states that "Protocols to [UNCLOS] and changes to the instruments establishing the various regional tuna bodies would have to be made", in order to "ensur[e]that the proper international legal basis exists for limiting entry into tuna fisheries ands assigning property rights to the participants in those fisheries."

[44] Serdy, *supra* n 28, at 275-276.

[45] While the "eastern Pacific" is not defined in the IATTC's current Convention (*supra* n 1), the "Tropical" in the Commission's name does not seem to be a bar to extending the Commission's management measures well into the temperate zone (40 degrees on either side of the equator in Resolution C-02-03, *infra* n 148). Article 3 of the Antigua Convention defines a Convention Area extending to 50°N and 50°S, and west to 150°W, while the species coverage is expanded by Article I(1) to "stocks of tuna and tuna-like species and other species of fish taken by vessels fishing for tuna and tuna-like species in the Convention Area".

[46] *Supra* n 11.

> covered by this Convention at those levels of abundance which will permit the maximum sustained catch.

The "fishes covered by this Convention" are defined in paragraph 1 of the same Article as "yellowfin (Neothunnus) and skipjack (Katsuwonus) tuna in the waters of the eastern Pacific Ocean fished by the nationals of the High Contracting Parties, and the kinds of fishes commonly used as bait in the tuna fisheries, especially anchovetta, and of other kinds of fish taken by tuna fishing vessels". The "other kinds of fish" may in context have been most likely intended as a reference to fish other than tunas, but has been stretched to a species of tuna, bigeye (*Thunnus obesus*) for which there now exists a directed fishery in the waters of the eastern Pacific.

Article VII, paragraph 1 of the Antigua Convention will on entry into force give the IATTC the following functions *inter alia*:

> (c) adopt measures that are based on the best scientific evidence available to ensure the long-term conservation and sustainable use of the fish stocks covered by this Convention and to maintain or restore the populations of harvested species at levels of abundance which can produce the maximum sustainable yield, inter alia, through the setting of the total allowable catch of such fish stocks as the Commission may decide and/or the total allowable level of fishing capacity and/or level of fishing effort for the Convention Area as a whole;
>
> (e) …, determine, on the basis of criteria that the Commission may adopt or apply, the extent to which the fishing interests of new members of the Commission might be accommodated, taking into account relevant international standards and practices;
>
> (h) adopt appropriate measures to prevent or eliminate overfishing and excess fishing capacity and to ensure that levels of fishing effort do not exceed those commensurate with the sustainable use of the fish stocks covered by this Convention;
>
> (l) where necessary, develop criteria for, and make decisions relating to, the allocation of total allowable catch, or total allowable fishing capacity, including carrying capacity, or the level of fishing effort, taking into account all relevant factors;

Accordingly, there is no restriction on the type of management measures that may be taken by the IATTC under either its present treaty or its future one.

(b) More recent fisheries treaties

By way of illustration of the point that the Antigua Convention is not unusual, similar provisions in the three fisheries treaties concluded or under negotiation since then. The 2006 Southern

Indian Ocean Fisheries Agreement[47] does not create a commission, but the powers of the Meeting of the Parties in Article 6 are similar:

ARTICLE 6 – FUNCTIONS OF THE MEETING OF THE PARTIES

1. The Meeting of the Parties shall:

…

(d) formulate and adopt conservation and management measures necessary for ensuring the long-term sustainability of the fishery resources, taking into account the need to protect marine biodiversity, based on the best scientific evidence available;

…

(h) develop rules and procedures for the monitoring, control and surveillance of fishing activities in order to ensure compliance with conservation and management measures adopted by the Meeting of the Parties including, where appropriate, a system of verification incorporating vessel monitoring and observation, and rules concerning the boarding and inspection of vessels operating in the Area;

(i) develop and monitor measures to prevent, deter and eliminate illegal, unreported and unregulated fishing;

…

(k) establish the criteria for and rules governing participation in fishing; and

(l) carry out any other tasks and functions necessary to achieve the objectives of this Agreement.

2. In determining criteria for participation in fishing, including allocation of total allowable catch or total level of fishing effort, the Contracting Parties shall take into account, inter alia, international principles such as those contained in the 1995 Agreement.

3. In applying the provisions of paragraph 2, the Contracting Parties may, inter alia:

(a) designate annual quota allocations or fishing effort limitations for Contracting Parties;

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[47] Southern Indian Ocean Fisheries Agreement, done in Rome, 7 July 2006, not yet in force, text available at http://www.fao.org/legal/treaties/035t-e.htm (accessed on 17 March 2008).

(b) allocate catch quantities for exploration and scientific research; and

(c) set aside fishing opportunities for non-Contracting Parties to this Agreement, if necessary.

Similarly, Article 7 of the third revision of the draft Convention on the Conservation and Management of High Seas Fishery Resources in the South Pacific Ocean[48] circulated by the Chairman in advance of the fifth meeting to negotiate the founding instrument of a Southern Pacific fisheries commission in Guayaquil in March 2008 gives the future Commission the following functions:

(a) adopt conservation and management measures to achieve the objective of this Convention;

(b) determine the nature and extent of participation in fisheries;

…

(f) develop and establish effective monitoring, control, surveillance, compliance and enforcement procedures, including market-related measures and non-discriminatory trade-related measures;

(g) develop processes in accordance with international law to assess Contracting Party, Flag State and Port State performance with respect to the implementation of their obligations under this Convention and adopt proposals if appropriate to ensure implementation of such obligations;

(h) adopt proposals for measures to prevent, deter and eliminate IUU fishing;

(i) review the effectiveness of the provisions of the Convention and the conservation and management measures adopted by the Commission in meeting the objective of this Convention;

…

(m) exercise any other function and take any other decisions that may be necessary for achieving the objective of this Convention.

Finally, NAFO has recently completed the overhaul of its 1978 Convention and in the finalised text of the amendments adopted at its 2007 meeting, Article 8 permits the Commission to adopt conservation and management measures that expressly include "total allowable catches and/or levels of fishing effort and [to] determine the nature and extent of participation in fishing". In

[48] Available at http://www.southpacificrfmo.org/assets/Fifth%20International%20Meeting%20March%202008/SP%2005%20WP1%20Chair%5C%27s%20draft%20Convention%20text%20rev%203.doc (accessed on 17 March 2008).

addition Article 9(d) specifically provides for adoption by it of supplementary measures aimed at "preventing, deterring and eliminating IUU fishing."[49]

C Consideration of quota trading by fisheries commissions

Serdy (2007) observed that precedents for the trading of quota have been established by at least three international fisheries commissions: the International Commission for the Conservation of Atlantic Tunas (ICCAT), the Northwest Atlantic Fisheries Organisation (NAFO)[50] and the International Baltic Sea Fisheries Commission (IBSFC).[51] A fourth commission could have been added to this list, namely the IATTC itself, though the omission may be thought to be excusable since – as will seen below - the trading forms an incidental part of the IATTC's capacity management scheme, the governing resolution of which is not drafted in terms of administering a trading system. Before turning to this, however, it is appropriate to examine what has happened in other commissions since that survey.

For ICCAT, the *ad hoc* approach previously described[52] has continued. The report of its 2007 meeting was not yet available in April 2008, but in 2006 ICCAT set catch limits for the northern and southern stocks of swordfish that divides 12,815 tonnes among the EC, the US, Japan and Canada in fixed proportions for 2007 and 2008, but provided for the annual transfer from the US to Canada of 25 tonnes without affecting the underlying percentages, and of 20 tonnes from the UK on behalf of its overseas territories in the Atlantic to France on behalf of St Pierre and Miquelon.[53] The individual limits of Morocco, Mexico, Senegal and Belize are to some extent pooled, in that the Commission may transfer amounts to any of them whose limit is exhausted, provided the TAC does not rise.[54] The flexibility for Japan to count catch in certain parts of the area against its unused limit for the southern stock is maintained,[55] while the US may take up to 200 tonnes of its quota from the southern swordfish area.[56] An innovation is that any party may transfer up to 15 per cent of its quota to any other party with an allocation (of which there are

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[49] NAFO doc GC Doc. 07/4, Amendment to the Convention on Future Multilateral Cooperation in the Northwest Atlantic Fisheries (Annex 17 to NAFO doc GC Doc. 07/5, *Report of the General Council, 24-28 September 2007, Lisbon, Portugal*), available at http://www.nafo.int/publications/frames/general.html (accessed on 20 March 2008).

[50] Created by the Convention on Future Multilateral Cooperation in the Northwest Atlantic Fisheries, done at Ottawa, 24 October 1978, 1135 UNTS 369.

[51] Created by the Convention on Fishing and Conservation of the Living Resources in the Baltic Sea and Belts, done at Gdańsk, 13 September 1973, 1090 UNTS 54.

[52] Serdy, *supra* n 28, at 271-281 and 283-284.

[53] Supplemental Recommendation by ICCAT to Amend the Rebuilding Program for North Atlantic Swordfish, in "Recommendations Adopted by ICCAT in 2006" (Annex 5 to Proceedings of the 15th Special Meeting of the International Commission for the Conservation of Atlantic Tunas (Dubrovnik, Croatia – November 17 to 26, 2006), in ICCAT, *Report for biennial period, 2006-07 Part I (2006), Vol.1* (hereafter ICCAT Green Book 2007/1), 122 at 124 (paragraph 3(c), footnotes 2 (US undercatch) and 4 (UK undercatch)).

[54] *Ibid*., footnote 3.

[55] *Ibid*., paragraph 7.

[56] *Ibid*., paragraph 3(c), footnote 1.

21), which may not retransfer it to a third such party, but transfers to cover overcatch are not permitted.[57] A like provision is made for the western stock of Atlantic bluefin tuna,[58] and in addition there is provision for transfer of US undercatch: 75 tonnes and 100 tonnes to Mexico in 2007 and 2008 respectively not further transferable and 50 tonnes to Canada in each of those years.[59] This is to be contrasted with the recommendation governing the eastern stock of Atlantic bluefin tuna, where transfer of quotas and catch limits among members and cooperating non-members requires Commission permission.[60]

There is nothing of consequence to report in NAFO in either 2006 or 2007, the footnote in the quota tables referring to the possibility of trading in squid quota simply continuing from year to year.[61] By contrast, the situation in NEAFC has become appreciably clearer. In 2006, Recommendation I speaks of Denmark (in respect of the Faroe Islands and Greenland), the EC and Norway having agreed to transfer 3766 tonnes of their joint quota to the Russian Federation, the level to be reduced and phased out by no later than 2010.[62] The same formula is repeated in the following year's Recommendation I, except that the figure for 2008, in line with the reduction mentioned the previous year, has become 3000 tonnes.[63] In 2007 there was also a mysterious reference in Recommendation II to quotas transferred from one party to another,[64]

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[57] *Ibid*., paragraph 14. The rule against retransfer is not much of a discipline, however, since it could be argued that it is not the same share of the quota that is being transferred, or the sale could precede the purchase.

[58] Supplemental Recommendation by ICCAT concerning the Western Atlantic Bluefin Tuna Rebuilding Program, in ICCAT Green Book 2007/1, *supra* n 53, 144 at 146 (paragraph 9).

[59] *Ibid*., paragraphs 6(d) (transfers to Mexico) and 6(e) (transfers to Canada).

[60] Recommendation by ICCAT to Establish a Multi-Annual Recovery Plan for Bluefin Tuna in the Eastern Atlantic and Mediterranean", in ICCAT Green Book 2007/1, *supra* n 53, 130 at 132 (paragraph 11).

[61] See Annex I.A (Annual Quota Table) in both Annex 9 to NAFO doc FC Doc. 06/14, Report of the Fisheries Commission, 18-22 September 2006, Dartmouth, Nova Scotia, Canada and Annex 12 to NAFO doc FC Doc. 07/24, Report of the Fisheries Commission, 24-28 September 2007, Lisbon, Portugal, available on the NAFO website at <http://nafo.int/publications/frames/general.html> (accessed on 28 March 2008).

[62] Recommendation by the North East Atlantic Fisheries Commission in accordance with Article 5 of the Convention on Future Multilateral Cooperation in the North-East Atlantic Fisheries at its Annual Meeting in November 2006 to adopt Conservation and Management Measures for Mackerel in the NEAFC Convention Area in 2007 (Annex G to Report of the 25th Annual Meeting of the North-East Atlantic Fisheries Commission, 13-17 November 2006, Volume II: Annexes, available at http://www.neafc.org/reports/annual-meeting/docs/25neafc_annual_2006_vol2_annexes.pdf (accessed on 18 March 2008), paragraph 4.

[63] Recommendation by the North East Atlantic Fisheries Commission in accordance with Article 5 of the Convention on Future Multilateral Cooperation in the North-East Atlantic Fisheries at its Annual Meeting in November 2007 to adopt Conservation and Management Measures for Mackerel in the NEAFC Convention Area in 2008 (Annex E to *Report of the 26th Annual Meeting of the North-East Atlantic Fisheries Commission, 12-16 November 2007, Volume II – Annexes*, available at http://www.neafc.org/reports/annual-meeting/docs/26neafc_annual_2007_vol2_annexes.pdf (hereafter NEAFC26 Report)), paragraph 4.

[64] Recommendation by the North East Atlantic Fisheries Commission in accordance with Article 5 of the Convention on Future Multilateral Cooperation in the North-East Atlantic Fisheries at its Annual Meeting in November 2007 to adopt Conservation and Management Measures for Blue Whiting in the NEAFC Convention Area in 2008 (Annex C to NEAFC26 Report, *supra* n 63), paragraph 6.

reflecting the separate Agreed Record which leaves the question of quota transfer to bilateral arrangements.[65]

The unique scheme of the IBSFC[66] has come to an end along with that commission itself, wound up in 2006 after all its remaining members apart from the European Community and the Russian Federation joined the former.[67] One further RFMO, the Western and Central Pacific Fisheries Commission, has had the issue of quota trading brought to its attention by a team of consultants engaged to provide advice on questions of allocation; their report highlights the useful role that trading can play as a lubricant allowing for adjustment of quota shares in lieu of having to renegotiate the entire allocation of the TAC of a stock each time two members wish to undertake a transaction.[68] Nothing appears to have come of this, however, as the larger question of allocation has been consigned for the time being to the too-hard basket.[69] Finally, in the CCSBT too, where earlier in this decade some Members and cooperating non-members were displaying considerable interest in quota trading, delegations' attention has more recently been consumed by the priority being given to ascertaining the extent of past overcatch and how much previously unreported effort was expended in taking it, so that there has been no substantive discussion of trading since 2005.[70] For the IATTC context, however, it is worthwhile to expand on the earlier

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[65] See "Arrangement for the Regulation of the Fisheries of Blue Whiting in 2008" (Annex 1 to *Agreed Record of Conclusions of Fisheries Consultations between Iceland, the European Community, the Faroe Islands and Norway on the Management of Blue Whiting in 2008*, available at http://www.neafc.org/news/docs/blue_whiting_2008_agreedrecord_signed.pdf (accessed on 18 March 2008)), paragraph 5.

[66] Serdy, *supra* n 28, at 285-286.

[67] See http://ec.europa.eu/fisheries/cfp/external_relations/rfos/ibsfc_en.htm, accessed on 18 March 2008.

[68] D.J. Agnew, D. Aldous, M. Lodge and G. Parkes, "Discussion Paper: Allocation issues for WCPFC tuna resources – Report to the Secretariat" (Attachment B to WCPFC doc WCPFC3-2006/15, Discussion Paper on Allocation Issues), at <www.wcpfc.int/wcpfc3/pdf/WCPFC3-2006-15%20[Allocation].pdf> (accessed on 18 March 2008), at 49-51 and thereafter *passim* to 59.

[69] WCPFC, Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean, Third Regular Session, 11-15 December 2006, Apia, Samoa, at 16-17 (paragraphs 119-122), available at http://www.wcpfc.int/wcpfc3/pdf/WCPFC3%20-Summary%20Report%20Consolidated%20report.pdf (accessed on 18 March 2008) and WCPFC, Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean, Fourth Regular Session, Tumon, Guam, USA, 2-7 December 2007, at 45 (paragraphs 327-331), available at http://www.wcpfc.int/wcpfc4/pdf/WCPF4%20Summary%20Report%20and%20Attachments.pdf (accessed on 18 March 2008).

[70] There was no discernible discussion at all in either 2006 or 2007 - see CCSBT, *Report of the Extended Commission of the Thirteenth Annual Meeting of the Commission, 10-13 October 2006, Miyazaki, Japan* (hereafter CCSBT-EC5 Report; Appendix 4 to CCSBT, *Report of the Extended Commission of the Thirteenth Annual Meeting of the Commission, 10-13 October 2006, Miyazaki, Japan*), available at <*www.ccsbt.org/docs/pdf/meeting_reports/ccsbt_13/report_of_CCSBT13.pdf*> (accessed on 4 April 2008); CCSBT, *Report of the Extended Commission of the Fourteenth Annual Meeting of the Commission, 16-19 October 2007, Canberra, Australia* (hereafter CCSBT-EC6 Report, Appendix 3 to CCSBT, *Report of the Fourteenth Annual Meeting of the Commission, 16-19 October 2007, Canberra, Australia*), <*www.ccsbt.org/docs/pdf/meeting_reports/ccsbt_14/report_of_CCSBT14.pdf*> (accessed on 18 March 2008).

discussion by reproducing the terms of reference for the independent advice on quota trading sought in 2003 and commenting on the advice itself and one Member's reaction to it.

The terms of reference were in fact very detailed:

1. Provide a brief overview of the international legal framework governing high seas migratory fish stocks relevant to the issue of quota trading.

2. Within this context, provide advice on:

   - the consistency of trading with relevant international law, including the aims of the [1993] Convention, allocation principles of the Convention, and the respective rights and duties of states under international law.

   - The nature of national allocations established by the Commission, specifically:

     - Are allocations "owned" by members?

     - Does a national allocation create a form of "right" that can be considered sub-divisible and able to be traded?

     - If allocations are sub-divisible who has lawful authority over allocation and reallocation of access to the stock i.e. does the authority rest with the member state or the Commission?

     - Does any "right" to an allocation remain ongoing or is it dependent upon conditions such as a member's capacity to harvest it directly?

     - How do these issues apply to the "catch limits" for cooperating non-members? Do these limits constitute a different form or nature of "right"?

     - Are the circumstances different for high seas and exclusive economic zone fishing?

3. Identify where other regional fisheries bodies have implemented quota trading arrangements and within what legal framework these have been developed.

4. If satisfied that a quota trading system is consistent with the international legal framework for highly migratory fish stocks and the Convention, provide advice on:

   - The general characteristics necessary for a trading system to be consistent with international law;

   - The conditions that the Commission may wish to apply to ensure the effective functioning, including monitoring, of any trading system; and

- The process issues that will need to be addressed by the Commission in order to establish a trading system.[71]

1 The independent advice

The advice was provided by William Edeson of the Centre for Maritime Policy at the University of Wollongong, described as "formally [*sic*] senior legal counsel at the FAO". The Edeson advice begins by noting that international law has little to say directly on the subject of quota trading. It contrasts the rights-based fishing within zones of national jurisdiction under the sovereign rights of the coastal State, which "involve in varying degrees the opportunity for individuals to have a right to quota and to trade that right" (ITQs being an example of this), with the position on the high seas, where:

> it is less easy to establish a system of tradable quotas, as no State, or group of States, is in a position to give an unqualified right. It is also much more difficult to predict which States might choose to exercise the freedom of fishing on the high seas in respect of their nationals. Thus, any right granted in respect of fishing on the high seas will at best be an incomplete or imperfect right.[72]

In other words, Edeson is here highlighting the impossibility of limiting entry to the high seas fishery. He confirms that terms such as "appropriate management" and "conservation and optimum utilisation" mandated for SBT by Article 3 of the 1993 Convention for the Conservation Southern Bluefin Tuna[73] "would not on their face exclude trading of quota".[74] From the wording of Article 8 he deduces that "quota trading was not in the forefront of the objectives and purposes of the Convention. However, it is not excluded either." The broad range of matters the CCSBT may consider (he cites in particular subparagraph (b) of paragraph 3 and subparagraph (f) of paragraph 4), "put it beyond doubt that the Extended Commission could address quota trading should it wish to do so, and to put in place a process for this."[75]

Turning to the position of cooperating non-members, Edeson analyses the resolution by which that status was created,[76] drawing particular attention to the written commitments that the

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[71] "Quota Trading under the Convention for the Conservation of Southern Bluefin Tuna" (Attachment A to CCSBT doc CCSBT-EC/0410/16, on file with author, hereinafter "Edeson advice"), at 3.

[72] *Ibid.*, at 4.

[73] Done at Canberra, 10 May 1993; 1819 UNTS 359.

[74] Edeson advice, *supra* n 71, at 5.

[75] *Ibid.*, at 5. This is on the basis (at 7) that the Extended Commission, under the resolution that established it (Resolution to Establish an Extended Commission and an Extended Scientific Committee (Attachment I to CCSBT, *Report of the Seventh Annual Meeting, 18-21 April 2001, Sydney, Australia* (hereinafter CCSBT7 Report), at <http://www.ccsbt.org/docs/pdf/meeting_reports/ccsbt_7/report_of_ccsbt7.pdf> (accessed on 28 March 2008), "can do, in respect of quota allocations, what the Commission itself can do."

[76] "Resolution to Establish the Status of Co-operating Non-Member of the Extended Commission and the Extended Scientific Committee" (Attachment 7 to *Report of the Extended Commission of the Tenth Annual Meeting of the Commission, 7-10 October 2003, Christchurch, New Zealand* (hereafter CCSBT-EC2 Report; Appendix 3 to *Report*

candidate State or entity gives to the Extended Commission under paragraph 2, subparagraph 4, including (b) “abide by the conservation and management measures and all other decisions and resolutions adopted in accordance with the Convention”. An applicant

> has arguably…bound itself in international law by making the formal written statement…even if there is no binding treaty between the Commission and the cooperating non member…Further, the actions of the Commission and the non member would be governed by international law principles of estoppel and acquiescence.[77]

Paragraph 8 of the Resolution, which provides for annual renewal of the status by the Extended Commission if the cooperating non-member qualifies to retain it,

> will make it impractical for the Extended Commission to deal with the matter except temporarily, as there would be no legal basis for compelling the State in question to make a longer term commitment short of actually acceding to the Convention.[78]

This might require qualification in the case of parties to the UN Fish Stocks Agreement (UNFSA), who “would have no choice but to operate through the Commission by virtue of article 8.4”, but since not all members of the Extended Commission are parties, the reliance that can be placed on this is limited.[79]

On the specific subject of rights to and ownership of quota, the Edeson advice distinguishes between SBT within EEZs and those on the high seas. In the former rights to fish could be granted to individuals or vessels “that are similar to a tradable property right”, but for the latter

> the situation is different in view of the fact that the resources are…subject to the freedom of fishing on the high seas, and…all States have a right to fish on the high seas. It should also be noted that the right is given to States, not individuals.
>
> Thus, any right to fish on the high seas can never be absolute. Under a treaty regime dealing in part with high seas fisheries, while the parties to the treaty might wish to grant to their respective nationals a right described as a property right, it can only be at best a relative right.[80]

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of the Tenth Annual Meeting of the Commission, 7-10 October 2003, Christchurch, New Zealand)), available at <http://www.ccsbt.org/docs/pdf/meeting_reports/ccsbt_10/report_of_ccsbt10.pdf> (accessed on 28 March 2008).

[77] Edeson advice, *supra* n 71, at 10.

[78] *Ibid.*, at 11.

[79] *Ibid.*, at 11-12. The Republic of Korea has since ratified UNFSA (see the UN’s law of the website, specifically <http://www.un.org/Depts/los/reference_files/status2007.pdf> (accessed on 28 March 2008),.but the reference in Article 1(3) to the Agreement applying *mutatis mutandis* to “fishing entities” is not normally taken as allowing Taiwan to accede in that capacity.

[80] *Ibid.*, at 13-14.

On this point, while the 1993 Convention's application is not spatially restricted (a view supported by Article 1, which states that its applies to SBT *simpliciter*) and it does not distinguish between the EEZ and the high seas for allocative purposes, it

> needs to be seen against the background of the preamble to the Convention which notes the sovereign rights of the coastal States over the resources in the EEZ. In other words, coastal States would retain the right to do what they wish with their quota which has been taken within its [*sic*] own EEZ, unless there was a decision of the Commission to the contrary under article 8…subject to any constraints imposed by articles 15.3 and [15.]4.
>
> …In this situation, it would fall to be determined by each member how it gave quota to its nationals. Thus, if one State chose to allocate its quota to nationals in the form of a tradable right as between its own nationals, there would be nothing to stop it.
>
> On the other hand, it would seem that, once a decision has been made which has the consent of all parties, and has been adopted by the Extended Commission and confirmed by the Commission, then as a matter of international law, it is binding on them. The Extended Commission could, therefore, impose conditions on tradable quotas both in EEZs and on the high seas if it chose to do so.[81]

As to whether UNCLOS prevents States from setting up a system for trading of quota in highly migratory species on the high seas, the advice concludes with some hesitation that

> there is nothing in the wording of article 64 or articles 116 to 119…which precludes trading in quota, so long as the objectives set out in those provisions are observed.
>
> Further, if a group of States wishes to…set up a tradable quota system among themselves, then, provided it does not lead to defeating, for example, the conservation or the optimum utilization of the species in question, it would be permissible.
>
> The principle [*sic*] constraints…would be the need to ensure that such a system did not infringe the right of all States for its [*sic*] nationals to fish on the high seas in accordance with article 116, and the requirement that conservation measures adopted and their implementation do not discriminate in form or in fact against the fishermen of any State (article 119.3).[82]

The advice identifies the 1993 Convention as another possible source of constraints, but dismisses Article 8, paragraph 3, since any inference from the directive in subparagraph (a) for a TAC and its "allocation among the parties" that trading might be restricted to being among parties is not supportable in light of the concluding words, which allow the CCSBT to decide on

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[81] *Ibid.*, at 14-15.

[82] *Ibid.*, at 15-16. See *infra*, text at and following n 126, for an instance of how trading might tend to defeat the conservation, though probably not the optimum utilisation, of a stock.

"other appropriate measures". Returning to paragraphs 3 and 4 of Article 15, these "do not in their terms actually prevent quota being traded", but "do place an obligation on the parties to ensure that any quota traded does not have the effect of undermining any measures adopted".[83]

Accordingly, the advice identifies three distinct situations of trading: (a) among the members of the Extended Commission there would be "no problem"; (b) from a member to a cooperating non-member, the position could depend on where the catch was to be taken: within the EEZ of the member it would be subject to the latter's sovereign rights, but on the high seas the written commitments of the non-member would make it "subject to the same restraints as are imposed on members. It could, it seems, trade its quota in the same way as if it were a member."; and (c) from a member or a cooperating non-member to any other State or entity, a "possibility [that] is probably just theoretical at the present", where the conclusion is that, provided the constraints in Article 15 of the 1993 Convention are respected, "there appears to be no restraint on such transfer"; if the external transferee were party to UNFSA, its agreement under Article 8, paragraph 4 of that treaty to "apply the conservation and management measures established" would put it "in a position similar to a cooperating non-member", whereas a non-party to UNFSA would be merely be under a general obligation to cooperate in terms of Articles 64 and 116-119 of UNCLOS.[84]

The question on how other fishery commissions have addressed the issue of trading is answered by reference to the practice of ICCAT and NAFO, not considered here.[85]

The last section of the advice deals with the characteristics of a quota trading scheme and the factors to be borne in mind should the CCSBT wish to establish one: these

> would depend on how elaborate a system the Extended Commission would wish to set up. At one extreme, it may wish to do no more than to require that members…and cooperating non-members seek the approval of the Extended Commission to trade quota. Such permission might have attached to it certain conditions, for example, that quota can only be traded among members of the extended commission. Or, it might choose to impose conditions on trading quota to chartered vessels.
>
> At the other extreme, the Extended Commission might wish to set up a much more complicated system whereby it set up a regime for all southern blue fin [*sic*] tuna wherever located and allocated the quota directly to those seeking to fish.[86]

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[83] *Ibid.*, at 16-17.
[84] *Ibid.*, at 17-18. There also "does not appear to be a substantial difference in effect" between national allocations of members and catch limits of cooperating non-members: at 18.
[85] *Ibid.*, at 18-19; *supra*, text at n 52.
[86] *Ibid.*, at 19. By necessary implication this bypasses the step of national allocations, and is thus a guaranteed way to avoid discrimination contrary to UNCLOS Article 119(3), provided that non-members can join and thus make their nationals eligible to bid for quota.

After rehearsing the effect of the various provisions of UNCLOS and UNFSA already cited, the advice concludes that:

> The most important element will be to ensure that a quota trading system does not result in the abandonment of responsibility for ensuring that the obligations with respect to conservation and management are not [*sic*] observed merely because a quota has been transferred. The most practical means of achieving this would be to permit quota trading only among members and cooperating non members, and to exclude the possibility of trading outside that group.[87]

For a "full fledged quota trading scheme" the CCSBT would then need to consider what criteria would give the right to apply for allocation of quota, and whether trading should be limited to members, extended to cooperating non-members or also to others. If trading to others were to be permitted, the Edeson advice suggests that it may be necessary to attach conditions to such transfers. These might include respect for the conservation and management measures adopted, permitting transfer only where the flag State is in a position to ensure compliance with them (which in turn might suggest that the Extended Commission should separately authorise each transaction of this sort) and monitoring of the utilisation of the quota[88] – essentially putting the transferee in the same position as if it had given the written commitment of a cooperating non-member. It would be desirable, however,

> to avoid a situation where such States had no choice but to purchase quota as a means of gaining access to southern bluefin tuna. This might give rise to arguments that the system was discriminatory towards such States.[89]

Another question would be the duration of quota allocations – the fact that allocations to cooperating non-members could only be for a year at a time might call for adjustment of the yearly renewal cycle if a move to multi-year quotas were being contemplated. Further decisions could be needed on the circumstances in which quota might lapse, be reduced or cancelled, and on how chartering and joint ventures would be managed in relation to traded quota. Although a scheme could be instituted by a simple resolution of the Extended Commission, an in-principle decision in favour of quota trading, "accompanied by an indication of the elements it would like to have included in such a scheme" was recommended as a preliminary step to guide the drafting of the resolution.[90]

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[87] *Ibid.*, at 20.
[88] *Ibid.*, at 21.
[89] *Ibid.*, at 22. In the longer term, however, this is precisely the situation the members appear to want to achieve. As is apparent from nn 178-180 *infra* and accompanying text, however, this will come about not by force of the quota trading system itself, but by the operation on it of future trends in international fisheries law.
[90] *Ibid.*

2 Responses to the advice

In response to the Edeson advice, the Secretariat produced a discussion paper[91] and New Zealand a legal opinion of its own.[92]

(a) The Secretariat paper

The Secretariat summarised the Edeson advice and applied it to the history of the SBT fishery, noting that Australia's ITQ system was an application of property rights within the EEZ in the exercise of sovereign rights of a coastal State, and characterising as trade the bilateral agreements in the late 1980s and early 1990s by which Japan fished Australia's quota in its EEZ – and apparently also New Zealand's chartering arrangements whereby some of its quota was fished by vessels flagged to non-members.[93] The advice is interpreted as implicitly favouring restricting any quota trading system to members and

> formal cooperating non-members at most. Restriction of participation to this group would give a framework for ensuring the conservation and management objectives of the CCSBT and would allow a compliance process to be instituted.[94]

Restriction to members only could "act as an incentive for cooperating non-members to accede" to the 1993 Convention, but would "limit the utility of the system by limiting trading opportunities."[95]

The paper divides States outside this circle into "range states" (i.e. those through whose EEZs SBT migrates) and the remainder. It notes that the former "have some rights in relation to the fishery in their EEZs", singling out South Africa but, curiously, not Indonesia. Though South Africa "might be bound to the Extended Commission's conservation and management measures because it has ratified the UN Fish Stocks Agreement", it argues that

> one country's circumstances should not dictate a general rule for the operation of a fundamental system like quota trading. Exclusion of this group might also encourage accession to provide a potential pathway for the development of their fishery.[96]

Inclusion of any others, however, "would seem totally inconsistent with the objectives of the Convention. It would transfer management of the fishery outside the scope of the Convention.[97]

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[91] "Commission for the Conservation of Southern Bluefin Tuna Quota Trading – Discussion Paper" (Attachment B to CCSBT doc CCSBT-EC/0410/16, *supra* n 71; hereinafter "Secretariat paper").

[92] "Convention for the Conservation of Southern Bluefin Tuna "Quota Trading"" (CCSBT doc CCSBT-EC/0410/Info01, on file with author; hereinafter "New Zealand legal opinion").

[93] Secretariat paper, *supra* n 91, at 1-2. The last element is farfetched since the quota was admitted to be still New Zealand's; see New Zealand's own view *infra*, text at n 116.

[94] *Ibid.*, at 2.

[95] *Ibid.*

[96] *Ibid.*, at 2-3.

[97] *Ibid.*, at 3.

On the question of ownership, the Secretariat paper unexceptionably interprets the Edeson advice as being that "it would not be inconsistent with international law" for the Extended Commission to institute a "quota trading system that effectively granted a tradable right of some kind to members across the fishery." This would reduce the question for the Extended Commission to the level of quota available for trading to be held by members and cooperating non-members.[98] It notes that any such system would be dependent on there always being a TAC and national allocations – if these could not be set, the system would be rendered inoperable. It suggests that the need to ensure that the high seas freedom to fish was not infringed would be met by restricting its operation to members and cooperating non-members, though there would still be a need to cooperate with others in setting conservation and management measures.[99] As to timing, "any trading would need to be finalised prior to the setting of the TAC and national allocations or soon thereafter to be practical." Since this is done on an annual cycle, the quota trading system would need to match it, lest quota trading extending beyond a year "allocate a right to trade in a quota that did not exist."[100]

In ascending order of complexity, the Secretariat paper envisages options ranging from trading being allowed within EEZs only, members negotiating trades bilaterally and advising the CCSBT subsequently through the Secretariat; bilaterally negotiated trades requiring CCSBT approval at annual meetings; and members declaring in advance to the CCSBT how much quota they wish to make tradable, with the amount subject to approval but not the actual trades, of which the Secretariat would simply be kept informed. Under the last option there could be some requirement, either case by case or by application of a formula, that some of the quota to be traded be set aside for conservation purposes, e.g. the tonnage gained by the transferee would be only half that relinquished by the transferor.[101] The paper advocates letting the market rather than the CCSBT set the price at which quota is traded, since the latter would generate "sub-optimal results from an economic perspective" as well as being "very difficult and almost impossible to manage effectively." Leaving it to the transacting parties would by contrast ensure that "the appropriate price signals and national interests would be considered."[102] For transactions that led to a transfer of effort between the surface fishery targeting juveniles and the longline fishery targeting more mature fish, the paper suggested three options: (a) to trade in fish numbers from longlining to the surface fishery, but in weight in the other direction; (b) to express trades in "adult equivalent" terms, based on scientific advice as to their relative impact

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[98] *Ibid.*

[99] *Ibid.*, at 4. This appears to be a *non sequitur*, however, as it is hard to see why opening the system to all comers would of itself infringe their freedom to fish.

[100] *Ibid.* It is not clear why this is so – since the right is to a given share of whatever TAC or TAE the commission may in future declare, there seems to be no reason why the share for, say, 2012 could not be traded in 2008, though its uncertain size will obviously depress its value.

[101] *Ibid.*, at 4-5.

[102] *Ibid.*, at 5.

on the fishery; (c) to impose an absolute catch limit on the juvenile fishery and allow trading only up to the point where the limit is reached.[103]

The Secretariat paper also adverts to the need for systems to monitor trade and record catch against traded quota. As a minimum it suggests that any trade must be reported to the Secretariat for entering in a register it maintains to which Members would have access, the transferee to be responsible for ensuring the additional quota was not exceeded, with all existing requirements in relation to fishing against national allocations applying to fishing against additional quota. Finally, the system and the trading that took place under it should be reviewed at the CCSBT annual meeting, so that their impact on the fishery could be taken into account in setting the TAC and national allocations.[104]

(b) New Zealand's opinion

The New Zealand legal advice doubles as a policy paper. It proceeds from a stance of scepticism as to the need for a quota trading system, reserving its position on the matter and suggesting that further thought be given to it "before resources are spent determining the conditions of any such system and the consequent nature of the rights a member would enjoy in its allocation."[105] It treats "quota transfer" as a generic term including sale, lease or transfers within season, concentrating on "the principle of transfer of allocations rather than on secondary issues such as consideration or financial return", which it suggests are premature.[106]

It concludes that under the CCSBT's legal framework a member may not unilaterally divide and transfer its allocation to another member or non-member; to establish a system that allowed this, a decision of the CCSBT would be necessary, which would have to be in accordance with the members' obligations under the 1993 Convention, UNCLOS and UNFSA. While the latter two do not preclude such a system, both

> place limits on the extent to which any transfer system may provide for quota trading or quota leasing (e.g. flag state responsibilities; coastal state rights; compliance and enforcement responsibilities; and obligations to non-members and new members).[107]

New Zealand argues that determination of the extent to which a member enjoys rights in its national allocation does not ultimately answer the key question of whether a member of the CCSBT has the legal capacity unilaterally to sub-divide and transfer its allocation. After traversing the relevant provisions of the 1993 Convention, the New Zealand paper suggests that

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[103] *Ibid.*, at 5-6. The last item is an attempt to take account of the complication described *supra* n 35. At 7 an alternative to (b) is canvassed: quota in trades shifting effort from the longline to the surface fishery should be reduced by a factor of three.
[104] *Ibid.*, at 6.
[105] New Zealand legal opinion, *supra* n 92, at 6 and 8.
[106] *Ibid.*, at 1.
[107] *Ibid.*, at 1-2.

> the nature of the obligations the Convention imposes on members is such that there is a prima facie duty upon members to recognise the responsibility of the Commission to allocate the TAC and to abide by decisions of the Commission.
>
> The subdivision and allocation of the TAC is a conservation measure, the implementation of which has a direct impact on the orderly and sustainable development of the resources.
>
> Members of the Commission recognise the exclusive competency of the Commission to determine SBT conservation measures, including the setting of the TAC and its allocation…In agreeing to abide by the Commission's management and conservation measures, members effectively limit their right to access the high seas, as conferred by UNCLOS article 116, such that their nationals can access the SBT fishery only to the extent permitted by the Commission.
>
> In the current CCSBT legal context, it has not been established that members enjoy an 'entitlement' in an allocation, where entitlement is an absolute right to a benefit granted immediately upon meeting a legal requirement. The Commission is not obliged to set a TAC…the Convention permits the Commission to withdraw, limit, amend or reallocate the TAC at any time…members do not enjoy ownership rights in an allocation in that they are not entitled to compensation from the Commission if the allocation were revoked or reallocated, or if their actual catch is less than their national allocation permits.
>
> The allocation by the Commission of the TAC creates a relationship by which it could be argued a member enjoys a legitimate right to access the high seas SBT fishery but is under a corresponding duty to ensure that its nationals refrain from catching more SBT than the amount permitted by the Commission through its allocation of the TAC. The right a member enjoys in its allocation is therefore a right to access the SBT fishery only in respect of its own nationals and to the extent permitted by the Commission. The allocation is itself a limit on a member's right to access the fishery as opposed to an entitlement in a resource.[108]

Thus New Zealand, though arguing on somewhat different lines from the analysis in Section B above, also concluded that national allocations are not in themselves assets but limitations on the freedom to fish. The restriction to the members' own nationals, both in principle and in the light of New Zealand's history of chartering foreign vessels, is implicitly confined to the high seas. This is confirmed when the New Zealand opinion goes on to argue that the effect of UNCLOS Article 116 is that

> it is through their nationality that individuals and vessels access the resources of the high seas. The concept of flag state responsibilities is essential to the operation of international law regulating the high seas. The establishment of a direct compliance

[108] *Ibid.*, at 3-4.

> relationship between the Commission and the flag state of those fishing against the TAC is essential to the proper management of resources under the jurisdiction of an organisation of states. Unilateral transfer beyond ones [*sic*] own nationals, in the absence of a compliance relationship between the Commission and the flag state would be inconsistent with members' obligation to respect flag state responsibilities.[109]

By "compliance relationship" New Zealand appears to mean *inter alia* a mechanism for accounting for catch of SBT, similar to the accounting for effort discussed in section E below. It thus implicitly disagrees with Edeson's analysis that Article 15, paragraph 4 of the 1993 Convention (not mentioned in its opinion) is no obstacle to transfer of quota to non-members. It is not clear, however, what the notion of flag State responsibility adds here. Given that a national allocation is only a catch limit, it does not follow that a transfer agreement between a member and a non-member engages such responsibilities at all. If anything, the member would be doing the CCSBT (or IATTC) and its fellow members a service by securing for the first time from the non-member a quantitative limit on its catch (or effort), which, if adhered to, would mean no net addition of catch (or effort).[110]

This confusion is only partly resolved by New Zealand seeing in Articles 64 and 118 of UNCLOS a duty to cooperate with the Commission itself, an essential element of which is

> the need to adhere to the Commission's conservation measures, including its decision on the allocation of the total allowable catch. In the absence of an allocation decision by which the Commission permits quota transfer, unilateral sub-division and transfer of an allocation to another member or non-member would be inconsistent with the UNCLOS duty to cooperate because…a collective decision of the Commission would be required to determine the necessary conditions of transfer.[111]

Again, while it is certainly possible to speak of Members owing duties to the CCSBT (or for our present purposes IATTC),[112] in the context of internal transfers, this adds nothing to the analysis in section B, particularly as only the transferor's fellow members are in a position to enforce its obligations. It may be conceded, however, that the duty to cooperate may indeed be a basis on which to resist transfer to non-members in commissions whose constitutive treaties lack an equivalent of Article 15, paragraph 4 of the 1993 Convention – but Article XXVI of the Antigua Convention is a close equivalent.[113]

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[109] *Ibid.*, at 4.

[110] Assuming the quota was time-limited, however, if the CCSBT did not approve of the transaction, it could decline to allocate the same figure to the member the following year.

[111] New Zealand legal opinion, *supra* n 92, at 4-5.

[112] *Supra* n 34.

[113] Article XXVI reads:

New Zealand concludes that

> [t]he Commission has not transferred sufficient management and disposal rights to its members and has not set up the necessary conditions under which quota transfer could operate. In the absence of an indication otherwise, the argumentation is that the Commission retains the capacity to manage the TAC, part of which is the management of national allocations, in the collective interest of the Commission members…Until such time as the Commission agrees on the conditions under which quota transfer would be permitted, any unilateral subdivision and transfer of a national allocation would be contrary to members' obligation to abide by decisions of the Commission, particularly its conservation and management measures.[114]

It concedes, however, that "there is no legal reason to prevent the Commission establishing a quota transfer system, setting the conditions under which the system would operate."

As for coastal States' EEZs, the opinion stresses that the greater rights such a State enjoys in its EEZ are

> only in respect of access to its EEZ and its management, consistent with international law. A coastal state member of CCSBT does not, in the current legal context, have the capacity to subdivide and transfer its SBT allocation to another member or a non-member simply because it is a coastal state. To do so would undermine the Commission's capacity to define and manage allocations under the Convention's article 8(3).[115]

If a coastal State gives foreign vessels access to its EEZ under Article 62, paragraph 2 of UNCLOS because it does not itself have the capacity to harvest the entire allowable catch, this does not amount to transfer of allocations to another member, "because the other member would be fishing either against its own quota or against the coastal state's quota but would not itself enjoy any additional quota."[116]

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1. The Commission and its members shall encourage all States and regional economic integration organizations…and…fishing entities…that are not members of the Commission to become members or to adopt laws and regulations consistent with this Convention.
2. The members of the Commission shall exchange information among themselves, either directly or thorough the Commission, with respect to activities of vessels of non-members that undermine the effectiveness of this Convention.
3. The Commission and its members shall cooperate, consistent with this Convention and international law, to jointly deter vessels of non-members from carrying out activities that undermine the effectiveness of this Convention. To this end the members shall, *inter alia*, call to the attention of non-members such activities by their vessels.

[114] New Zealand legal opinion, *supra* n 92, at 5.
[115] *Ibid*.
[116] *Ibid.* The same logic suggests that allowing a non-member access to the surplus in the EEZ would also not be a transfer of quota, since the non-member would be fishing against the coastal State Member's quota.

On trading under domestic law, the New Zealand opinion is that

> [t]he basis upon which a party may permit quota trading internally is a matter for each member to determine in accordance with its own legislation, provided that it retains authority over the allocation such that it can comply with any revision of the TAC or any other conservation and management decision of the Commission at any time.[117]

Supporting Edeson's view that property-like rights can be created in the EEZ, it cautions that such rights would "be subject to a member's continued responsibility to ensure that its obligations with respect to the conservation and management measures of the SBT fishery were respected in any such arrangement."[118]

Should the CCSBT decide to permit quota trading, New Zealand notes that "a quota transfer system would have to be in compliance with the Commission's obligations under article 8, members' competing obligations under the [1993] Convention, UNCLOS, and where applicable, UNFSA."[119] It considers that such a decision could be made under either of the subparagraphs of Article 8, paragraph 3. Its view of the list of factors relevant to allocation in subparagraph 4, however, is that these are "dynamic" rather than static and "will necessarily be subject to adjustment". Going beyond the Edeson view of UNCLOS Articles 64 and 116-119, the New Zealand opinion suggests that it would not be enough for a quota transfer system simply to "observe the objectives" of these provisions, but would have to leave members able to implement "their competing obligations", in particular to ensure that any conservation measure was non-discriminatory, did not undermine the CCSBT's conservation measures, took into account the interests of coastal States through whose EEZs SBT migrates, and was reinforced by a compliance relationship with the CCSBT based on flag state responsibilities and enforcement. Members party to UNFSA would in addition need to have an obligation to ensure that any such system did not preclude any State with a real interest in the fishery from participating in the CCSBT.[120]

Finally, it answers the original question by observing that:

> The nature of the rights a member would enjoy in its allocation would be determined by the extent of the conditions imposed by the Commission. For example, if the Commission permits quota transfer only between members, then the nature of the right a member enjoys in its allocation, specifically the transferability of the right, would be accordingly limited. In the same way, if the Commission limited quota transfer to a

[117] *Ibid.*, at 6. This seems more of a theoretical than a practical constraint, since only in exceptional circumstances will a Member in this position wish to cut the TAC and national allocations in mid-season after they have already been set – and then presumably only because the stock is in such poor condition that that quotaholders cannot anyway catch their full shares.

[118] *Ibid.*

[119] *Ibid.*

[120] *Ibid.*, at 7-8.

> particular timeframe then the durability of the right a member enjoys in its allocation would be accordingly limited.[121]

Despite the implicit divergence of views on the effect of Article 15, paragraph 4 on transfers to non-members revealed by the CCSBT's intersessional activity on quota trading in 2004, there thus appears to be a common view that it is the nature of national allocations, rather than anything in the 1993 Convention or other applicable rules of international fisheries law, that prevents them from being traded as assets from one member to another, or to a non-member. Accordingly, it was open to the CCSBT, were it so minded, to establish a system of trading. The outlines of that system, as the Edeson advice and the analysis in section B show, were by no means pre-ordained, and the design process might have been expected to be taken forward at the CCSBT's 2004 meeting. The debate there, however, did not proceed very far.[122] In 2005 it appeared that only Korea was still interested in actively pursuing the matter given the renewed deterioration of the stock, with members considering reduction of the TAC. Interest was nonetheless expressed, albeit as a low priority, in the CCSBT developing a more general policy covering joint ventures and chartering as well as buying and leasing of quota, drawing on any ICCAT precedent.[123] The Executive Secretary orally summarised the Edeson advice, to the effect that a positive decision by the CCSBT would be needed for a quota trading system to be introduced, but in the meantime chartering and joint ventures could be undertaken without transfer of quota, with the Member concerned remaining responsible for compliance and other related measures; bilateral access to a Member's EEZ also did not require the CCSBT's approval, but should be reported to it.[124] Undeterred, Korea said it would bring a set of principles and guidelines for trading to the 2006 meeting.[125] This did not happen as the CCSBT's attention has since early 2006 been consumed by the consequences of the crisis caused by revelations of persistent overcatch.

The first two objections appear rooted in the present state of affairs but do not amount to an argument against tradability of quotas. That based on the state of the stock – i.e. that quota which a party does not need or propose to fill is best left uncaught for the stock's sake – assumes that the trading being contemplated is transfer within a season, and is a real consideration for any stock in a depleted state, since transfer of quota that would not otherwise have been caught means that actual catch will increase, since the quota is being used more efficiently.[126] Although

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[121] *Ibid.*, at 8.

[122] See Serdy, *supra* n 28, at 282.

[123] *Report of the Extended Commission of the Twelfth Annual Meeting of the Commission, 11-14 October 2005, Taipei, Taiwan* (hereafter CCSBT-EC4 Report; Appendix 3 to CCSBT, *Report of the Twelfth Annual Meeting of the Commission, 15 October 2005, Narita, Japan*)), <*www.ccsbt.org/docs/pdf/meeting_reports/ccsbt_12/report_of_ccsbt12.pdf*> (accessed on 18 March 2008), at paragraphs 107 and 108.

[124] *Ibid.*, at paragraph 109.

[125] *Ibid.*, at paragraph 111.

[126] See in this context Arnason's proof that under this system all quota will be used: R. Arnason, "Minimum information management in fisheries", (1990) XXIII *Canadian Journal of Economics* 630 at 652.

the corollary of this is that there should be some compensating reduction in the TAC, other members not party to the transaction would surely reject any reduction of their own national allocations for this reason. Yet to require the transacting parties alone to bear the reduction would in all likelihood negate any benefit to them that the transfer might bring. For this reason, it would seem advisable to introduce a trading scheme only when the stock is in a healthy state. The objection in principle appears to be rooted in lingering resentment of the way in which one new entrant to the CCSBT first built up a catch history and thus a position of strength was able to extract a relatively high national allocation from the original members, but then found itself unable to continue catching it profitably.[127] Having one or more members in this position thus further complicates the establishment of a quota trading scheme, since prior agreement on an initial distribution would be needed for any trading system to be established, and the other members could be expected to demand the retirement of any persistently large unused portion of a member's quota.

The third view makes trading contingent on a rule for deriving changes to TAC and national allocations from a pre-agreed long-term formula rather than the present system of annual agitation with its attendant risk of failure to reach a decision. This has much in common with New Zealand's emphasis on the "compliance relationship" as an essential underpinning of any trading system, which could be expected to bring significant, if incidental, improvements to international fisheries management by forcing commissions to improve their performance in accounting for catch of or effort on the stocks for which they are competent. This is the subject of the next section.

D Trading of capacity quota in IATTC, past and future

The IATTC's fisheries are facing a crisis, with information presented to the 74th meeting in 2006 revealing that the biomass of bigeye tuna was below the level generating the average maximum sustainable yield, while that of yellowfin tuna would fall below the same benchmark unless additional management measures were applied.[128] Most of the States and cooperating non-

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[127] That new entrant, ironically, was Korea, whose preference to treat quota as an asset seems selective: at the same meeting it noted that its share of the budget did not incorporate a discount for the conservation value of leaving its national allocation mostly unused and asked that this be considered at the next meeting: *Report of the Extended Commission of the Eleventh Annual Meeting of the Commission, 19-22 October 2004, Busan, Republic of Korea* (hereafter CCSBT-EC3 Report; Appendix 3 to *Report of the Eleventh Annual Meeting of the Commission, 19-22 October 2004, Busan, Republic of Korea*), available at http://www.ccsbt.org/docs/pdf/meeting_reports/ccsbt_11/report_of_ccsbt11.pdf (accessed on 18 March 2008), at 3 (paragraph 14). But nothing appears to have come of this, and since under the formula in Article 11 of the 1993 Convention Korea could automatically have reduced its contribution by relinquishing part of its allocation, a sympathetic hearing was probably more than it could realistically expect.

[128] IATTC Resolution C-06-02 (Resolution for a Program on the Conservation of Tuna in the Eastern Pacific Ocean for 2007) <http://www.iattc.org/PDFFiles/C-06-02-Conservation-of-tunas-2007.pdf> (accessed on 21 February 2008), 4th preambular paragraph.

parties located on the American continent or in its vicinity use purse-seine vessels, but those from the other side of the Pacific catch tuna by longlining. In 2007 limits were placed on the longline catch of bigeye that are akin to a (sub-)total allowable catch and its division into national allocations: China (2639 tonnes), Japan (34,076 tonnes), Korea (12,576 tonnes) and Taiwan (7593 tonnes). Every other member and cooperating party has a limit that is the higher of its 2001 catch and 500 tonnes.[129] The limit was not renewed for 2008, but a proposal taken to the 77th meeting in March 2008 notes that fishing mortality needed to fall by 9 per cent for yellowfin and 21 per cent for bigeye if the target fishing mortality of F_{msy} were to be attained.[130]

The control of the purse seine fleet has proceeded on both catch and effort fronts. In terms of effort, the initial decision by the IATTC to limit the carrying capacity of purse-seine vessels operating in the Eastern Pacific Ocean was taken at its 62nd meeting in October 1998. The 13 States with purse-seine vessels fishing there for tuna were each assigned for the calendar year 1999 the carrying capacity limit shown in Table 1 at the end of this paper, established on the basis of factors such as the national fleet's catches in the years from 1985 to 1998, catches taken within the EEZ or equivalent zone before its declaration, landed tonnages of tuna, the contribution to the IATTC conservation program, including the reduction of dolphin mortality.[131] The "right of several states without vessels currently fishing in the EPO, but with a longstanding and significant interest in the EPO tuna fishery, to develop their own tuna fishing industries" was acknowledged and affirmed, as well as the "legitimate rights under international law" of France (by virtue of Clipperton Island and French Polynesia) and Guatemala to develop tuna fishing fleets there (by implication, for the first time).[132] Should the total capacity added by new entrants approach 6000 tonnes, the IATTC would "meet to consider immediate action to adjust capacity or take other action to ensure the sustainability of the fisheries."[133] Joseph has

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[129] *Ibid*., paragraph 8. In 2003 Resolution C-03-12 (Resolution on the Conservation of Tuna in the Eastern Pacific Ocean, Appendix 4 to IATTC, *Minutes of the 71st Meeting, Del Mar, California (USA), 6-7 October 2003*), <http://www.iattc.org/PDFFiles/ IATTC%2071%20Minutes%20Oct%2003%20ENG.pdf> (accessed on 3 March 2008)), 7 at 8 (paragraph 7) limited each party's and cooperating non-party's longline bigeye catch for 2004 to its 2001 level. At the 2004 meeting this was extended to 2006, except that China, Japan, Korea and Taiwan were given separate limits of 2639 tonnes, 34076 tonnes, 12576 tonnes and 7593 tonnes respectively: Resolution C-04-09 (Resolution for a Multi-Annual Program on the Conservation of Tuna in the Eastern Pacific Ocean for 2004, 2005 and 2006, Appendix 2.i to IATTC, *Minutes of the 72nd Meeting, Lima (Peru), 14-18 June 2004*), <http://www.iattc.org/PDFFiles/IATTC%2072%20Minutes%20Jun%2004%20ENG.pdf> (accessed on 3 March 2008)), 28 at 29 (paragraph 8).

[130] IATTC doc IATTC-77-04 REV (Proposal for Conservation of Yellowfin and Bigeye Tuna in the Eastern Pacific Ocean) <http://www.iattc.org/PDFFiles/IATTC-77-04-Conservation-proposalREV.pdf> (accessed on 21 February 2008), at 2. Under the precautionary approach to fisheries embodied in Annex II to the UN Fish Stocks Agreement [full if first], F_{msy} should be replaced by a more conservative target (provision?), but that is a separate issue beyond the scope of this paper.

[131] Resolution on Fleet Capacity, October 1998, available at <www.intfish.net/docs/1998/iattc/C-98-11> (accessed on 11 March 2008), paragraph 1.

[132] *Ibid*., paragraph 3.

[133] *Ibid*., paragraphs 5 and 6.

observed[134] that all the country quotas listed in the table were approximately equivalent to the actual fleets operating during 1998, other than that of Costa Rica, which was based on its status as a coastal State, its tuna processing facilities, long involvement in the tuna conservation programs in the Eastern Pacific, its contributions as a founding member of the IATTC, and its intention to acquire a fleet of tuna vessels. Subsequently Guatemala declared a carrying capacity quota of about 10,000 tonnes consisting of vessels that had reflagged from other registries and several other coastal and non-coastal States lacking tuna fleets began negotiations within the IATTC to have capacity limitation quotas assigned to them, while other member States with small quotas sought increases in them that would permit their fleets to expand.[135]

Although the 1998 resolution contemplated that the limits would be reviewed annually,[136] they were prolonged only to June 2000[137] and then lapsed. Instead the IATTC decided to change the unit of measurement of carrying capacity to well volume.[138] With the fleet's carrying capacity in the eastern Pacific growing to around 180,000 tonnes, with more vessels thought to be about to enter the fishery, so that it was unlikely to stop there, the IATTC had a twofold problem: in the short term, to stop the capacity growing, and over a longer timeframe to reduce it.[139]

As for catch, at the 64th meeting in 1999, the earliest whose report is available on the IATTC website, a resolution was passed limiting that year's catch of bigeye tuna by the purse seine fleet in the Eastern Pacific Ocean to 40000 metric tonnes, not subdivided into national allocations.[140] This was provisionally renewed for 2000,[141] but not in 2001 for reasons that are not apparent from the meeting report.[142] For yellowfin tuna, the directed fishery was to cease when 265,000 tonnes had been caught or on 2 December 1999, whichever was earlier, but limited bycatch of

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[134] Joseph, *supra* n 43, at 39-40.

[135] Joseph, *supra* n 43, notes at 40 that the fleet's carrying capacity at the time was about 138,000 tonnes, so that the total of 158,837 tonnes set by the 1998 resolution included allowance for some increase.

[136] Resolution on Fleet Capacity, October 1998, *supra* n 131, paragraph 6.

[137] By Resolution C-00-01 (Resolution on Fleet Capacity (adopted by correspondence in February 2000), <http://www.iattc.org/PDFFiles/C-00-01%20Fleet%20Capacity%20resolution%20Feb%202000.pdf> (accessed on 7 February 2008)).

[138] *Ibid.*, paragraph 1. The difference between the two measures of capacity is lucidly explained in Joseph, *supra* n 43, at 25, but is not legally significant.

[139] Joseph, *supra* n 43, at 40.

[140] Resolution on the Conservation and Management of Bigeye Tuna in the Eastern Pacific Ocean (Appendix 3 to IATTC, *Minutes of the 64th Meeting, La Jolla, California, USA, 21-22 July, 1999*), <http://www.iattc.org/PDFFiles/IATTC_64thJul99.pdf> (accessed on 21 February 2008), at 1 and 5-6.

[141] Resolution for Implementing the Catch Limit of Yellowfin Tuna in 1999 10 October 1999 (Appendix 3 to IATTC, *Minutes of the 65th Meeting, La Jolla, California, USA, October 4-10, 1999* <http://www.iattc.org/PDFFiles/IATTC_65thOct99.pdf> (accessed on 21 February 2008), at 4 and 11-12.

[142] See Resolution on Yellowfin Tuna June 2000 (Appendix 3 to IATTC, *Minutes of the 66th Meeting, San Jose, Costa Rica, June 12, 14 & 15, 2000* <http://www.iattc.org/PDFFiles/IATTC%2066%20minutes%20Jun%2000.pdf> (accessed on 21 February 2008), at 3 and 11-12.

the species thereafter remained possible.[143] This was renewed in 2000[144] and in 2001 the figure was changed to 250,000 tonnes, to which the Director was authorised to add up to three increments of 20,000 tonnes each.[145] But there were no numerical limits in 2002.[146]

In Resolution C-00-10,[147] adopted by correspondence in August 2000, the IATTC had accepted that the then level of fishing capacity exceeded the optimal level for efficient harvest of the tuna resources of the eastern Pacific Ocean and committed itself to develop and implement a long-term capacity management plan to reduce purse seine carrying capacity to a target of 135,000 tonnes or such other figure as the Commission might decide, to serve as the basis for further measures to reduce and allocate the capacity.

At its 69th meeting in 2002, the IATTC adopted Resolution C-02-03.[148] This caps purse-seine vessel capacity measured by well volume in a defined area of the eastern Pacific Ocean bounded in the north by the parallel of latitude 40°N, in the west by the meridian of longitude 150°W, in the south by the parallel of latitude 40°S and in the east by the coast of the American continents.[149] The participants are not permitted to increase the capacity of any vessel under their flag operating in the area from those already on the Regional Vessel Register created by Resolution C-00-06[150] adopted at the IATTC's 66th meeting. Among the many details to be recorded for each vessel on the Register is its fish hold capacity.[151] After 28 June 2002 no new

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143 Resolution on Conservation of Bigeye Tuna in the Eastern Pacific Ocean 21 June 2001 (Appendix 9 to IATTC, *Minutes of the 68th Meeting, San Salvador (El Salvador), 19-22 June 2001* (hereafter IATTC68 Minutes)), <http://www.iattc.org/PDFFiles/ IATTC%2068%20minutes%20Jun%2001%20ENG.pdf> (accessed on 21 February 2008), at 5 and 13 (paragraph 1).

144 Resolution on Yellowfin Tuna June 2000 (Appendix 3 to IATTC, *Minutes of the 66th Meeting, San Jose, Costa Rica, June 12, 14 & 15, 2000* <http://www.iattc.org/PDFFiles/IATTC%2066%20minutes%20Jun%2000.pdf> (accessed on 21 February 2008), at 3 and 11-12.

145 Resolution on Yellowfin Tuna June 2001 (Appendix 8 to IATTC68 Minutes), at IATTC68 Minutes, *supra* n 143, 3 and 18.

146 Resolution on Conservation of Yellowfin and Bigeye Tuna in the Eastern Pacific Ocean (Appendix 9 to IATTC, *Minutes of the 69th Meeting, Manzanillo (Mexico), 26-28 June 2002*), <http://www.iattc.org/PDFFiles/ IATTC%2069%20minutes%20Jun%2002%20ENG.pdf> (accessed on 3 March 2008), at 32-33.

147 <http://www.iattc.org/PDFFiles/C-00-10%20Fleet%20Capacity%20resolution%20Aug%202000.pdf> (accessed on 7 February 2008), paragraphs 6 and 7.

148 Resolution on the Capacity of the Tuna Fleet Operating in the Eastern Pacific Ocean (Revised), <http://www.iattc.org/PDFFiles/C-02-03%20Capacity%20resolution%20Jun%202002%20REV.pdf> (accessed on 7 February 2008).

149 *Ibid.*, paragraph 1. Note, however, that the resolution is expressed in paragraph 13 to be without prejudice to "the rights and obligations of any participant to manage and develop the tuna fisheries under its jurisdiction or in which it maintains a longstanding and significant interest." If the intent of the reference to "national jurisdiction" is to preserve the possibility that the capacity limits are to apply only to the high seas part of the defined area, however, then the purpose and efficacy of the management measure as a whole risk being undermined. It appears, however, that the resolution has not in fact been interpreted in this way.

150 Resolution on a Regional Vessel Register <http://www.iattc.org/PDFFiles/C-00-06%20Vessel%20register%20resolution%20Jun%202000.pdf> (accessed on 7 February 2008).

151 *Ibid.*, paragraph 2(h).

vessel may be added to the Register, or the capacity of a vessel already on the Register increased, unless one or more purse-seine vessels at least offsetting the change is at the same time removed from the Register,[152] other than by the coastal States of Costa Rica, El Salvador, Guatemala, Nicaragua and Peru, which are given fixed higher limits.[153] The active Purse Seine Capacity List on the IATTC website[154] lists the hold capacity of each purse seiner currently on the Register but offers no clue as to whether each vessel was already on the Register on 28 June 2002.

The system created by this resolution is in essence a procedure for changing the list of purse seine vessels that may legally fish. On the face of it, the resolution appears – other things being equal – to create an obligation on IATTC members to freeze their capacity. This would seem to be the necessary implication of the combined effect of paragraphs 7 and 8 - if no new vessels may be added or the capacity of existing ones expanded without at the same time removing at least equivalent capacity, there is no other way in which a member's capacity can permissibly increase. This would make the state of the Register as at 28 June 2002 significant – not for the identity of the vessels, but for their combined capacity at the time in respect of each Member, since each has a continuing obligation (subject to paragraph 10 if it is mentioned by name there) not to exceed that baseline through subsequent additions of vessels, which must be balanced by removals (including sinkings).

As implemented in practice, however, [155] the Resolution has been taken as implicitly permitting transfers of flag of vessels on the Register from one Member to another without the need to seek the Commission's approval, and for this reason the capacity limits are not static. In fact, as Table 1 makes clear, several IATTC members have increased their overall fleet capacities beyond the levels they had on 28 June 2002 via vessel transfers from other flags. This can happen, for example, if the original flag does not remove the vessel from the Register. The vessel may then physically relocate to another Member, thus increasing the latter's total capacity in effect, as has occurred on numerous occasions.[156] If on the other hand the original flag State removes the vessel from the Register, it can only get back on the Register if the new flag State has capacity available to it, of which the three possible sources are vessel removals of its own, sunk vessels, or the paragraph 10 allocations.

This would seem to amount to a system of implied trading of quotas. In practice, however, the regime has now evolved into one where very few vessel transfers occur. Almost all IATTC members have decided, as a matter of policy, to remove from the register vessels that wish to reflag, thereby retaining for themselves the right to replace the vessel. This has made it

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[152] Resolution C-02-03, *supra* n 148, paragraphs 5 to 8.

[153] *Ibid.*, paragraph 10.

[154] http://www.iattc.org/VesselRegister/VesselList.aspx?List=AcPS&Lang=ENG, accessed on 4 April 2008.

[155] The author is indebted to Mr Brian Hallman of the IATTC Secretariat for supplying this information.

[156] Information likewise kindly furnished by Mr Hallman. Note that the difference between the last two columns of Table 1 should in principle all be accounted for by a combination of new capacity permitted by paragraph 10 of Resolution C-02-03 and trading; only anything beyond this would bespeak a State's non-compliance with its obligation under that Resolution to limit capacity.

impossible for vessels to reflag unless it is to a member that still has spare capacity to add new vessels.

The existing IATTC arrangements thus do not amount to trading in the sense one would ordinarily think of it or as it has developed in other RFMOs, in that the money changes hands between the purchaser and vendor of the vessel rather than the flag States, between which the accompanying capacity "quota" transfer is simply an administrative afterthought. Perhaps, paradoxically, this is the reason why member governments do not make more use of the facility - they realise that quota is an asset, but are not themselves getting any benefit from it when a vessel in respect of which they have it is sold. If so, they may reason, they may as well keep it for future use, even if the asset thereby becomes anything but liquid. This does not therefore lend itself to further elaboration of a capacity trading scheme; since the assets are either valuable but inalienable, or liquid but worthless.

As foreshadowed in one of its 2000 resolutions, the IATTC did indeed adopt a Plan for Regional Management of Fishing Capacity at the 73rd Meeting in June 2005,[157] but it is quite general in nature, and has not as yet had any practical effect; in particular, the reduction plan contemplated has not yet been discussed. The target is shifted to 158,000 cubic metres of well volume,[158] and the IATTC's Permanent Working Group on Fleet Capacity is directed, by 30 June 2006 "or as soon as possible thereafter, [to] evaluate the necessity and feasibility of a reduction plan to achieve the target level of well volume, with a target date for implementation to be determined by the Commission."[159] The capacity target is to be regularly reviewed "to ensure that it remains in balance with the available fishery resources and management objectives".[160] It is also provided that "The transfer, from the jurisdiction of one [Member or cooperating party] participant…to that of another, of any vessel that will fish for species covered by the Convention and be included on the Regional Vessel Register, shall be governed by relevant Commission resolutions."[161] (This appears to be a reference to the resolutions already mentioned, as none of relevance has since been adopted.)

E Accounting for effort

Once set by RFMOs, it has not inevitably been the case that catch and effort limits have been adhered to, despite being ostensibly binding. Neither the existing IATTC Convention nor the 2003 Antigua Convention provides any means for the parties each to assure themselves that the others are adhering to their negotiated catch limits.

[157] http://www.iattc.org/PDFFiles2/IATTC-73-EPO-Capacity-Plan.pdf, accessed on 7 February 2008.
[158] *Ibid.*, paragraph 16.
[159] *Ibid.*, paragraph 22.
[160] *Ibid.*, paragraph 29.
[161] *Ibid.*, paragraph 30(a).

1 Institutionalised carryover of overcatch and undercatch

Important though adherence to quotas is for conserving fish stocks, a limited degree of flexibility around them may assist fisheries management. Allowing a modest proportion of unused quota to be carried over into the next year removes the "use it or lose it" incentive to try to fill the quota. Conversely, permitting a small amount of excess capacity to be debited against the following year's quota may act as a political safety valve, offering States facing domestic pressures to allow overfishing the alternative of legitimately borrowing from the stock, provided there are guarantees of repayment.

2 Non-commercial effort

The nearer quota comes to being perceived as a tradable asset, the more interest members will have in ensuring that all sources of effort are accounted for, since it would be more obvious than under the traditional national allocation system that any perceived gain by one member of an unfair advantage comes at the other members' expense. Bycatch of yellowfin and bigeye tuna from other fisheries is the most obvious potential source of friction in this regard, but other forms of non-commercial effort are recreational and indigenous fishing for the species concerned and scientific catch of it. There may be some overlap among the categories.

Recreational fishing limits typically impose a bag limit per person per day of a small number of fish. Since there is generally no limit to the number of persons engaging in recreational fishing, or on how many days per year they may fish, it follows that there is no effective upper limit to the total recreational effort in any jurisdiction. Recreational catch has become an issue within the CCSBT[162] and it is not hard to imagine how recreational effort could do so in IATTC. The CCSBT has also developed a history of allocating modest tonnages for scientific catches that do not count against national allocations. There is precedent for this in ICCAT, which has exempted participants' catches of up to 15 tonnes of Atlantic bluefin tuna (ABT) from otherwise applicable conservation measures.[163] For the various components of the Scientific Research Program the Members and the Secretariat from 2001 onwards requested, and the CCSBT approved, mortalities of 65 tonnes for tagging programs in 2002 and 40 tonnes in 2003, plus 3.6 tonnes of ordinary research mortality allowance for Japan in 2001, 6.5 tonnes in 2002 and 10 tonnes in 2003 for a series of spawning ground and acoustic surveys.[164] Research mortalities of

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[162] See the debate in CCSBT-EC6 Report, *supra* n 70, at 20-21 (paragraphs 108 to 112).

[163] See "Recommendation by ICCAT on Bluefin Tuna Research in the Central North Atlantic Ocean" (Annex 7-8 to *Proceedings of the 12th Special Meeting of the International Commission for the Conservation of Atlantic Tunas (Marrakech, Morocco – November 13 to 20, 2000)*), in ICCAT, *Report for biennial period, 2000-01 Part I (2000) - Vol.1*, 141 (paragraph 3).

[164] CCSBT, *Report of the Eighth Annual Meeting, 15-19 October 2001, Miyako, Japan* (hereafter CCSBT8 Report), available at <http://www.ccsbt.org/docs/pdf/meeting_reports/ccsbt_8/report_of_ccsbt8.pdf> (accessed on 28 March 2008), at 8 (paragraph 54) and 13 (paragraphs 95 and 97); *Report of the Extended Commission of the Ninth Annual Meeting of the Commission, 15-18 October 2002, Canberra, Australia* (Appendix 3 to *Report of the Ninth Annual Meeting of the Commission, 15-18 October 2002, Canberra, Australia*), available at

47 tonnes were approved in 2004 for an acoustic survey (1 tonne) and various tagging projects (46 tonnes); the like total for 2005 was 51 tonnes.[165] In 2006 research mortality allowances of 5 tonnes were approved for a trolling survey by Japan and 17 tonnes for two different tagging programs conducted by Australia.[166] Most recently in 2007 the Extended Commission readily agreed to grant research allowance for two projects endorsed by the Extended Scientific Committee: 5 tonnes for further tagging by Australia and 1 tonne for Japan to cover tagging during two surveys, and eventually approved an additional 10 tonnes for Australia's study of the use of stereo video cameras with farmed fish which had encountered opposition from Japan in the scientific body.[167]

ICCAT too has dealt on several occasions with non-commercial catch, for example passing an across-the-board resolution on recreational fishery statistics.[168]

3 Control of fishing by nationals

Since at international law States' jurisdiction over their nationals applies no less to natural and legal persons than it does to vessels, a further source of perceptions of unfair advantage is the use by nationals of fishery commission members of vessels flagged to non-members. Here again the experience of the CCSBT is instructive. At CCSBT4(2) New Zealand raised reports that Japanese interests had chartered bunkering vessels that were also used by fishing vessels flagged to non-members of the CCSBT, that it provided a market for non-member catch, and that there was considerable investment by Japanese interests in non-member SBT fishing operations.

In recent years the focus of attention has shifted to catch of SBT taken in Indonesian waters by vessels owned by Taiwanese interests but flagged to Indonesia, allowing Taiwan to maintain that

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<http://www.ccsbt.org/docs/pdf/meeting_reports/ccsbt_9/report_of_ccsbt9.pdf> (accessed on 28 March 2008), at 15 (paragraphs 97-100); *Report of the Extended Scientific Committee for the Eighth Meeting of the Scientific Committee, 1-4 September 2003, Christchurch, New Zealand* (Appendix 2 to *Report of the Eighth Meeting of the Scientific Committee, 1-4 September 2003, Christchurch, New Zealand*), available at <*http://www.ccsbt.org/docs/pdf/meeting_reports/ccsbt_10/report_of_sc8.pdf*> (accessed on 28 March 2008), at 19 (paragraph 106); CCSBT-EC2 Report, *supra* n 76, at 13 (paragraphs 70 and 71). Not all the allowances were caught: in 2002 only 0.8 tonnes had been used for the Japanese spawning ground survey and 13.28 tonnes for tagging programs: *ibid.*, at 27 (paragraph 69).

[165] CCSBT-EC3 Report, *supra* n 127, at 12-13 (paragraphs 87-89); CCSBT-EC4 Report, *supra* n 123, at paragraph 125.

[166] CCSBT-EC5 Report, *supra* n 70, at 18 (paragraph 103) approving CCSBT, *Report of the Extended Scientific Committee for the Eleventh Meeting of the Scientific Committee, 12 - 15 September 2006, Tokyo, Japan* (Appendix 2 to *Report of the Eleventh Meeting of the Scientific Committee, 12-15 September 2006, Tokyo, Japan*), available at <*http://www.ccsbt.org/docs/pdf/meeting_reports/ccsbt_13/report_of_SC11.pdf*> (accessed on 4 April 2008), at 25 (paragraphs 134 (Japan) and 136 (Australia)).

[167] CCSBT-EC6 Report, *supra* n 70, at 38-39 (paragraphs 205 and 211).

[168] Recommendation by ICCAT on Improving Recreational Fishery Statistics (Annex 5-9 to *16th Regular Meeting of the Commission, Rio de Janeiro, Brazil – November 15 to 22, 1999* (hereafter ICCAT16 Report), in ICCAT, *Report for biennial period 1998-99 Part II (1999) - Vol.1* (hereafter ICCAT Green Book 2000/1), 78.

their catch should be considered Indonesian.[169] This would be unproblematic had Indonesia become a member and the Taiwanese vessels been fishing against Indonesian quota; as it is, this is catch which it is in Taiwan's power to control, with a duty to do so considering that, through the resolution establishing the Extended Commission of which Taiwan is a member, it has given a "firm commitment to respect" Article 15, paragraph 4 of the 1993 Convention.[170] Although the beneficial ownership of fishing vessels is often kept deliberately obscure, ideally all purse-seine capacity deployed in the defined area owned or controlled by nationals of IATTC members should be brought into their mutual accounting.

F Conclusions

The argument for moving to permanent or indefinite quota shares is essentially that it provides an economic incentive to conserve the stock.[171] How easily might it be done?

It is apparent from the preceding analysis that, while no fisheries commission has yet established a fully designed quota trading mechanism, there is no fundamental international legal obstacle to doing so. All that is required, since a national allocation is an obligation of each member *vis-à-vis* each other member to restrict its catch or effort to a particular numerically defined limit, which the gaining party in any quota transaction will breach, is either an *ad hoc* decision to waive the obligation to the extent necessary to accommodate the transaction, as happens in ICCAT and NAFO, or for blanket consent to be given in advance either expressly, as in NEAFC, or implicitly through the establishment of a trading scheme. At a minimum, the latter would need a decision of the commission to approve in advance either all transactions or those falling with a particular class or classes of transactions that are notified to the secretariat, whereupon they would become binding on the commission's entire membership.[172]

Something more would almost certainly be required, however, to prevent transactions adding unsustainably to the fishing pressure on the stock, a particular risk when the limit is expressed in terms of capacity. Where on the other hand it is catches that are being limited, there needs to be a way for members to account to each other for their removals. It is possible to describe briefly its main features.

First, national allocations would need to be expressed as percentage shares of the TAC or TAE rather than in absolute terms. This may be more problematic for the IATTC's chosen route of

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[169] CCSBT8 Report, *supra* n 164, at 6 (paragraph 39). The SBT catches by the Philippines and the Seychelles were also thought to be by Taiwanese-owned vessels operating under flags of convenience: *ibid.* at 13 (paragraph 90).

[170] See Attachment I to CCSBT7 Report, *supra* n 75, paragraph 6.

[171] Arnason, *supra* n 126, at 648 has demonstrated that if quotas are not permanent, uncertainty leads to excessive discounting of future profits, diminishing the incentive to conserve the stock.

[172] The question of the price, if any, for which quota changes hands, is not strictly one for the commission. Even so, because both parties to the transactions, being States, are public bodies, they may well have to make the amount public in their usual domestic accountability mechanisms such as annual reports to a legislature. Thus, in the interest of transparency, there are strong arguments for the commission to insist on disclosure of the consideration as a condition of registering the transaction.

capacity limitation, because vessels capacity comes in discrete quanta that are not infinitely divisible – if the total is reduced by a given percentage, vessel owners may decide to alter their vessel to reduce their well volume by that percentage; but this seems inherently less efficient than one or more vessels whose combined capacity equals or exceeds the required absolute reduction being retired from the fishery and its owner selling the capacity right as an asset.

Secondly, allocations must also take into account new entrants, perhaps with different rules for coastal States as compared with other States. If not all States in whose EEZs the relevant stocks occur are already members, those who are not will have a right to join the commission and receive some national allocation,[173] but until they do, the existing members are in effect using those non-member coastal States' share of the TAC, and it is thus necessary to have some pre-agreed mechanism for how the existing members' national allocations will be reduced to accommodate that of any new coastal State members. As this may prove very hard to achieve in practice, the introduction of quota shares not limited in time may have to wait until all eligible coastal States have become members. For the IATTC this may not be unduly long in coming, as it is in the relatively fortunate position of having almost all coastal States with exclusive economic zones (EEZs) in its future Convention Area as either members or cooperating non-parties. Running from north to south, the States along the western seaboard of the American continent are Canada, the United States, Mexico, Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, Panama, Colombia, Ecuador, Peru and Chile; France and the United Kingdom also have territory (Clipperton Island and French Polynesia; Pitcairn and nearby islands respectively) in the eastern Pacific. Of these only Canada, Chile, Honduras and the UK are not currently members of the IATTC. El Salvador, France, Mexico, Nicaragua and Panama had as at 29 February 2008 ratified the Antigua Convention and Canada, Costa Rica, Ecuador, Guatemala, Peru and the United States had signed it. In the meantime, therefore, pending the entry into force of the Antigua Convention, only Canada, Chile and Honduras are not members, and of these Canada is listed on the website as a cooperating non-party, so that the longer-term question is what allowance to make for the likelihood that Chile and Honduras will eventually become parties to the Antigua Convention.

Non-coastal States would be able to accede to the Convention in order to become members of the IATTC, but would have to purchase capacity quota from an existing member if they wished to fish. While they might object that the requirement to pay for the authority to fish is inconsistent with the freedom of fishing, under UNCLOS Articles 116 and 118, this freedom is subject to the duty of cooperation with all existing participants in the fishery. It is submitted that, if the existing participants have set up through a fisheries commission a scheme outside which none of them is free to increase its catch, they are entitled to insist that any newcomer cooperate with them by participating in the scheme according to its terms. This conclusion is strengthened for parties to UNFSA, which cements commissions into a central position by requiring in Article 8, paragraph 3 that parties give effect to their duty to cooperate with other States by joining the

[173] See UN Fish Stocks Agreement, *supra* n 24, Articles 8(3) and 11.

commission or agreeing to apply its conservation measures. In turn the same provision requires the existing commission members to accommodate any newcomer prepared to fish on the some footing as the existing members.[174]

It is clear, however, that quota shares of indefinite duration raise, in a way that time-limited shares do not, the always difficult question of initial allocation that is inescapable when ITQs are introduced at the domestic level. It is precisely because this question can only be answered once, with national allocations thereafter merely being the automatic arithmetical consequence of subsequent quota transactions, that the initial allocation of members' relative shares can be expected to be no less contentious on the international plane.[175]

While adding the element of permanence to national allocations will not necessarily lead inexorably to their being traded, it is likely to generate pressures to that end, as producers seek to realise gains from differences in their marginal net benefits by reallocating effort among themselves. No such permanence is presupposed in the already existing trading regimes of the within-season type, but these are reasonably seldom used, having emerged piecemeal from the various fisheries commissions grappling with allocation problems.

With discussion of the issue happening already in a number of commissions, its progress is less likely to encounter the sorts of objections enumerated by the OECD,[176] which are not automatically translatable to the international level. Firstly, there is no reason to expect resistance from current members, even those whose fisheries are less profitable than those of potential new entrants, as the choice to retain or sell all or part of their national allocation will remain one for them alone.[177] If a member considers that it receives significant non-monetary benefits from participating in the fishery, it is entitled to resist offers. Secondly, while the wider concerns about the fairness of reserving an open-access resource for a privileged few with capital investment in the fishery and excluding all others have more substance, these can be met with two arguments: (a) at the international level those wanting to enter the fishery will most likely have made their investments already, and in any event there are few international fisheries in a healthy enough state for new investment in them to be encouraged; (b) their exclusion, if such it is, comes about not as a result of the adoption of trading by the fisheries commission, but by a

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[174] At least one well-regarded commentator believes that this implicit bargain has now achieved the status of customary international law; see *supra* n 25 and accompanying text.

[175] P.H. Pearse, "From Open Access to Private Property: Recent Innovations in Fishing Rights as Instruments of Fisheries Policy", (1992) 23 *Ocean Development and International Law* 71 at 78. He notes *ibid*. that in New Zealand 80% of quota rights changed hands at least once within five years of their introduction – a level of churning unlikely to be replicated at the international level.

[176] Organization for Economic Cooperation and Development (hereafter OECD), *Towards Sustainable Fisheries: Economic Aspects of the Management of Living Resources* (Paris: OECD, 1997), at 79.

[177] This is not to say that such resistance if it occurs would be surprising; one reason for it might be that, to the extent that the initial allocation is made on the basis of past declared catch, it would effectively penalise underreporting: R. Falloon (with the assistance of T.M. Berthold), "Individual Transferable Quotas: the New Zealand Case", in OECD, *The Use of Individual Quotas in Fisheries Management* (Paris: OECD, 1993), 43 at 46.

parallel development: the putative elaboration of the customary rule of cooperation in international fisheries law into a requirement that non-members abide by non-discriminatory rules of a commission if they are to fish. This test should be easily met by a commission that is open to new entrants to join, by either becoming a full member of the commission or subscribing to any formal cooperation mechanism that it operates, thus becoming eligible to purchase quota from existing members.[178]

In the longer term, the commission may well be able to capture some of the resource rent generated and distribute it among the commission members; ideally, non-members, even those not interested in fishing at all, should be able to become eligible for a modest share of this surplus by joining the cooperation mechanism, in effect trading any residual high seas freedom of fishing for this revenue stream.[179] Beyond that, it is possible to imagine a future legal rule in which monetary or other payments would be a way of compensating States for their compulsory exclusion from a share of the maximum sustainable yield,[180] though the question of how to

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[178] In reality, to avoid wasting time and money in joining a commission without any guarantee of quota, would-be new entrants would be likely to offer to buy quota first. The existing member, if minded to accept, would ensure, on the commission's behalf, that the transaction was not consummated until the eligibility criteria were met, on pain of remaining responsible to its fellow members for the purchaser's catch if it proceeded before this had occurred, as the secretariat would not then register the transfer.

[179] Such a solution, namely the creation of a series of regional ocean organisations which become beneficial owners of the high seas resources and the States who are their members by transforming their high seas freedom to fish into a right to a share of the profits, has recently been proposed in G.T. Crothers and L. Nelson, "High Seas Fisheries Governance: A Framework for the Future?", (2006) 21 *Marine Resource Economics* 341. To the extent that the bypassing of the step of national allocations is implied, this is an application of Edeson's "extreme" solution – *supra* n 86 – of allocations direct to operators. A similar idea was considered by Koers, *supra* n 30, at 253-258, but he concluded at 257 that, because it

> would be required to function within an extra-legal context which would be largely unforeseeable at the time of its creation and…would have a virtual monopoly, the price of the organization's failure could be disaster. This also explains why States will be extremely reluctant to create such an organization.

This made it (at 258) "at best a blueprint for a remote future, although not necessarily…for utopia." Crothers and Nelson do not clearly state what under their scheme would become of existing fisheries commissions whose mandate extends to the high seas. It is suggested, however, that an overt creation of property rights would be more likely to provoke opposition than the gradual development of them by the existing commissions themselves through trading, in the way that Molière's Monsieur Jourdain resisted the idea of employing prose, only to discover that this was what precisely he had been doing all his life: "Par ma foi! il y a plus de quarante ans que je dis de la prose sans que j'en susse rien, et je vous suis le plus obligé du monde de m'avoir appris cela." (Molière, Le Bourgeois Gentilhomme, Act II, Scene 4).

[180] Having rejected the idea in the previous footnote, Koers, *supra* n 30, instead proposed, at 301-303, transferable rights of access to fully exploited stocks and levies for fishing them (as agent of the world community), which would be set at a level that made it equally attractive to fish or simply collect revenue, but adjusting this for the risks of fishing, so that the average fishing return should be somewhat higher. This revenue Koers would have distributed under a formula basing a State's share on a "reverse" relationship with its share in total world catch and *per capita* national income. Nonetheless (at 311), it was "crucial" that any limitation of entry be effected at the global level, because "it should not be left to fishing nations alone to decide to what extent non-fishing States would have access to the wealth of the sea's living resources."

calculate the quantum of compensation is likely to remain vexed for many years and delay the emergence of any such rule.

There remain, of course, many problems of high seas fisheries that quota trading cannot solve. For one, it will not prevent stock collapse if the TAC or TAE is set too high, as the example of the North-West Atlantic cod fisheries shows; unless the TAC or TAE is restrictive of effort, the value of allocations will be too low for them to fulfil their intended function of limiting entry.[181] Nor does trading remove the need for policy on bycatch from other fisheries and discarding.

Despite its advantages, introduction by the IATTC of a capacity transfer system is far from a foregone conclusion. It would depend on each Member accepting that its UNCLOS and customary law right to fish on the high seas for stocks managed by IATTC could be bargained away, in some cases not by themselves but, if the quotas are attached to individual vessels, by the owners of the tuna fishing vessels flagged to the Member.

If concentration of ownership internationally is a problem, as is sometimes said to be the reason at national level for reluctance to move to ITQs, a similar rebuttal applies: absolute purity of the system is not a prerequisite. It is perfectly possible for the rules adopted by a commission to place a cap on the share of the catch that a single member may lawfully accumulate; this would reduce the value of the asset somewhat, but not alter its character. Similarly, tradable catch shares would remain subject to other management measures such as closed seasons and areas. Nor need tradability be an immediate feature of any scheme adopted by commissions; there is nothing to stop them establishing their initial distribution but postponing trading for some time; at national level too, ITQ systems in many fisheries do not allow transfer at first but subsequently do.[182] An intermediate alternative might be to start by permitting trading of small absolute amounts or percentages of an allocation at first, which would rise over time until no quota remained inalienable.

Considering the potential complexity of any accounting mechanisms,[183] it would also be sensible to have some subsidiary means for enforcement of quotas; for example, IBSFC members were

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[181] OECD, *supra* n 176, at 80-82.

[182] OECD, *supra* n 176, at 83.

[183] Despite addition, subtraction, multiplication and division being the only mathematical operations used, the opacity of the tables in ICCAT reports make it difficult to see how catch limits worked out in this way are derived; see e.g. "Compliance Tables: Compliance with catch limits and quotas in 2004" (Appendix 3 to *Report of the Meeting of the Conservation and Management Measures Compliance Committee* (Annex 9 to *Proceedings of the 19th Regular Meeting of the International Commission for the Conservation of Atlantic Tunas (Seville, Spain – November 14 to 20, 2005)*)), in ICCAT, *Report for biennial period 2004-05 Part II (2005) - Vol.1*, 219 at 220-229. The problems that might arise under an excessively complicated accounting system are illustrated by Canada's erroneous interpretation of an earlier measure (Annex 5-2 to ICCAT16 Report, in ICCAT Green Book 2000/1, *supra* n 168, at 70), taking paragraph 3(c) to mean that Canada could carry over only 10% rather than all of its unused dead discard quota (the reference to 10% was in fact Canada's share of the TAC). Canada did not subsequently reclaim the inadvertently forgone 90%. In M. Calcutt, S. Paul, J. Neilson and O. Murphy, "National Report of Canada", in ICCAT, *Report for biennial period, 2002-03 Part II (2003) - Vol.3*, 11 at 11 there are useful worked

able to refuse landings of quota species from vessels flagged to States whose quota is exhausted.[184]

A property system created by a multilateral treaty would survive the withdrawal of individual members provided a sufficient number remains; in terms of its own internal logic, the rights of outsiders are taken into account within the system, so only the status of the departing member changes. At least one element of entry into a system would need to be made irrevocable, however, regardless of any subsequent denunciation of the treaty: a State should not be able to accede to the treaty, liquidate its quota for gain and then leave the system in order to fish for the species on the high seas again. This could be prevented by a rule that reduction of a quota to zero by trading would extinguish that member's right at international law to fish for that species other than by purchasing quota, even if it subsequently ceased to be bound by the treaty (though it should not be prevented from reacceding).

If the aim is to overcome the tragedy of the commons besetting high seas fisheries, overall, it is hard to disagree with the OECD's conclusion that the available evidence reinforces the need for an institutional setting that accommodates property rights, or with its advocacy of indirect enforcement by holding flag States accountable for the actions of their vessels and nationals, with quota or trade sanctions for non-compliance.[185] This would require that the effect of purchasing quota should be that the transferee member's responsibility for reporting and compliance should be the same as if it had originally been allocated the entire amount by the commission. The wider implication of its call – to apply to high seas fishing a much more far-reaching form of mutual accountability of participants to each other, but also to non-participants still holding a potential right to fish thanks to UNCLOS Article 116 – is a logical consequence of the matters raised in this study, but remains beyond its scope.

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examples in prose of how overage and unused discard quotas carried forward to subsequent years in ABT and swordfish work.

[184] OECD, *supra* n 176, at 154.

[185] *Ibid.*, at 158. In V. Kaitala and G.R. Munro, "The Management of High Seas Fisheries", (1993) 8 *Marine Resource Economics* 313 it is noted at 325 that, without some mechanism of this kind, even a successful stock-rebuilding program will remain vulnerable to a breakdown in cooperation caused by the shift of bargaining power in high-cost harvesters' favour as the health of a stock is restored. Because of its objection procedure, this description is not met by NAFO (and presumably every other fisheries commission with a similar procedure): at 326.

Table 1: IATTC carrying capacity limits for national fleets[186]

Member or Cooperating State	1999 limit (in metric tonnes)	Limit as at 28 June 2002 (in cubic metres)	Fleet capacity (in cubic metres) by country as at April 2008	Change from 2002 to 2008 (in cubic metres)
Belize	1877	809	nil	-809
Bolivia††		6842	222	-6620
Colombia	6608	7259	12836	5577
Costa Rica	6000	9364 [0†]	nil	-9364
Ecuador	32203	56537*	63491**	6954
El Salvador	1700	6350 [5489†]	7415	1065
Guatemala		9340 [7640†]	7337**	-2003
Honduras††	499	1798	1700	-98
Mexico	49500	58636	62115**	3479
Nicaragua	2000	5300 [0†]	6023	723
Panama	3500	11313*	35385**	24072
Peru		4097 [902†]	1000	-3097
Spain	7885	12137	10116	-2021
United States	8969	11389	568**	-10821
Vanuatu	12121	6813	3609	-3204
Venezuela	25975	30577	28143	-2434
TOTAL	**158837**	**236561**	**235037****	**-1524**

* Includes capacity of vessels listed as sunk (Ecuador: two vessels sunk in November 2001 and June 2002 totalling 2132 m^3 capacity; Panama: one vessel sunk in September 1999 of 255 m^3 capacity).
† For the members listed in paragraph 10 of Resolution C-02-03, the lesser figure in square brackets is the actual capacity at the time according to the Register.
** Three vessels appear twice on the list: two totalling 3762 m^3 capacity are under both Ecuador and Guatemala, while one of 1161 m^3 capacity is common to the lists of Ecuador and Panama. The total counts these only once. Included also are vessels on the separate sunk and inactive register: six Ecuadorian vessels totalling 1437 m^3 capacity; five Mexican vessels totalling 4004 m^3 and one US vessel of 398 m^3 capacity.
†† The presence of Bolivia and Honduras in the table is anomalous, since they are neither members of the IATTC nor listed on the website as cooperating non-members.

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[186] The figures in the successive columns have been compiled from the following sources: 1999 – Resolution on Fleet Capacity, October 1998, *supra* n 131, paragraph 1; 2002 – a copy of the Register as at 28 June supplied by Mr Brian Hallman of the IATTC Secretariat; 2008 – the list of purse-seine vessels on the version of the Register found on the IATTC website <http://www.iattc.org/VesselRegister/VesselList.aspx?List=AcPS&Lang=ENG> (accessed on 4 April 2008) and <http://www.iattc.org/VesselRegister/VesselList.aspx?List=InSunkPS&Lang=ENG> (accessed on 29 April 2008). While many of the States have a greater capacity in 2008 than they had in June 2002, this does not indicate a lack of compliance on their part; see *supra* n 156 and accompanying text.